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HUNT'S

# MERCHANTS' MAGAZINE

AND

# COMMERCIAL REVIEW.

NOVEMBER, 1851.

## Art. I.—"PROTECTION vs. FREE TRADE."

### THE LAW OF PROGRESS IN THE RELATIONS OF CAPITAL AND LABOR.

FREEMAN HUNT, ESQ., *Editor of the Merchants' Magazine, etc.* :—

THE article which I contributed to the July number of your Magazine has drawn from R. S. a reply in the September number, to which I find it hard to make a rejoinder. Two persons cannot profitably discuss their differences of opinion without first settling the points in which they agree, and the authorities to which both are willing to appeal. Without this preliminary, the controversy is necessarily interminable. With this truth before me, I was careful in my comments on the article of R. S. in your June number, to cite no authorities except those which I deemed myself warranted in supposing he would promptly recognize as entitled to the utmost weight. In so far as I had to do with "A Farmer," it was simply my object to show, in the words of the Agricultural Report from the Patent Office, that there is "a governmental policy which results in impoverishing the natural fertility of the land," "which encourages the removal of all the elements of bread and meat from cultivated fields, and their speedy transportation beyond the possibility of restitution"—that this is the policy which looks mainly if not exclusively to foreign trade, and which, masking itself under the name of *free* trade, compels the exportation in their rudest and most cumbrous forms of the products of the earth, and with them of all the elements of fertilization and reproduction. I showed that this policy was in opposition to the teachings of Adam Smith, but was the result, foreseen and intended, of the doctrines of the modern English economists, who have abjured the faith of Smith, while they cling with persevering tenacity to the popularity of his name, and filch it for purposes hostile to his views.* I

* In August, 1803, Francis Horner, one of the first contributors to the *Edinburg Review*, a thoroughpaced advocate of, *pseudo*, free trade, wrote this to his friend Mr. Thomson, in reference to an application to him to furnish a set of notes for a new edition of Smith's Wealth of Nations:—"I should be *reluctant to expose Smith's errors before his work has operated its full effect.* We owe much, at present, to the superstitious worship of Smith's name, and we must not impair that feeling till the victory is more complete. Until we can give a correct and precise theory of the nature and origin of wealth, this popular, and feasible, and loose hypothesis *is as good for the vulgar as any other.*"

undertook further to show that, in addition to their apostacy from Adam Smith on the subject of the superior value of the domestic above the foreign trade, the theories of Malthus and Ricardo in relation to population and rent, necessarily led them to a schism with the disciples of Smith and of free trade, and drove them to that "policy which impoverishes the natural fertility of the earth." The drift of "A Farmer's" article, as I understood it, was that these modern theories had nothing to do with the progress of agriculture, that they might be either true or false, without influencing the course of a country's cultivation. I aimed to answer this by appeals to agricultural authority, and had nothing further to say about Mr. Carey, who has overset the theories of Ricardo and Malthus by showing the historical falsity of the imaginary facts on which they are founded, than to show that his system was in harmony with that of Smith, and gave beautiful consistency and order to the observed facts in regard to agricultural progress, as shown either by tracing the history of a single nation, or by a comparison of existing nations in different stages of advancement.

I had, indeed, in the first instance, written at sufficient length to give a tolerably fair sketch of Mr. Carey's system, and an outline of the course of reasoning and observation through which he was led to it. I found this too long for your pages, and before I had cut it down to suitable dimensions, the article of R. S. came to hand. This contained such egregious errors about the order of Carey's discoveries—*inventions*, R. S. chooses to style them—that I saw clearly R. S. could not have read him. He now admits the fact. I ought to have no further discussion with R. S. respecting Mr. Carey's views until the critic shall first inform himself what they are. Sidney Smith is said to have objected to the practice of reading a book before reviewing it, on the score of its giving a man a prejudice; but this was thought to be a mere witticism. I am inclined to think he would have had the grace to blush if actually detected in the fact.

Dismissing Mr. Carey for the present, I have only to answer for myself—I have to get out of a difficulty into which I was betrayed by some misconception in regard to the economical writer whom R. S. holds in reverence. I cited Smith, Malthus, Ricardo, McCulloch, and Mill, as concurring in a particular proposition. R. S. cooly replies, "it matters little what Smith, Ricardo, McCulloch, and Mill conceded—that would not make a proposition true if it were originally false." Doubtless; but R. S. was writing in defense of a school of which Ricardo and Malthus were the founders, and McCulloch and Mill are the chief living expositors. As against him they are good evidence. It is the rule of law that the party shall not be permitted to impeach or discredit his own witnesses. I am, however, willing to waive this rule, and R. S. may treat them as slightingly as he deems proper. In his September article he says:—"I am not willing to set aside all the great men who have written on the subject of Political Economy since Dr. Smith, to make room for Mr. Carey." Who are these great men? Give me their names and I will go to them for my citations. I had supposed that, by such phrases R. S. intended the English and Scotch critics. Now—for my sins—I have read them all pretty thoroughly. In referring to such a multitude I selected the authors of the faith maintained by R. S., and its greatest living apostles; but I have no special affection for them. Let R. S. name who, of the host, he will be tried by. I think myself able to show him that he cannot sit comfortably under the preaching of any one of them—that there is not a single one of them who has not made fatal concessions,

and been betrayed by the necessities of a false system into flagrant inconsistencies. I think myself justified in spending so many words on this head, because the advocates of the Manchester system of Political Economy are in the habit of assuming a supercilious tone of charity for the want of instruction on our side of the question. They talk of us, and to us, with an air of pity, as if it was unfortunate that we did not know our ideas had been exploded a long while ago by "all the great men who have written on the subject of Political Economy since Adam Smith." I believe the fact to be that we are quite as conversant with the works of those great men as they are. For my own part, assuredly I take no pride in it; it is the fruit of time mispent, spent in—

> "——— the toil
> Of dropping buckets into empty wells,
> And growing old in drawing nothing up."

For these reasons I want to get a bill of particulars, to the end, that we may show that we have fully considered what these great men had to say, and prove that we can answer them out of their own mouths.

The particular proposition which led R. S. to decline the testimony of Smith, Ricardo, McCulloch, Mill, and others was, "that the cost of transportation falls entirely upon the producer." It was put in relation to agricultural products. R. S. puts the case of a gentleman with a few thousand dollars wishing to become a farmer. He can buy land on Long Island for $100 per acre, but on further inquiry finds he can buy the same quality of land, at a distance, for $25 an acre. "He calculates the cost of the carriage of the produce to market, and other incidental expenses against the interest of capital saved, and if the interest of capital saved be more than the cost of carriage and other expenses, he of course buys the land at $25 an acre. Is the cost of carriage, in this case, paid by the farmer or capitalist? Certainly not. He obtains the same rate of profit upon capital invested as if he had been at market."

This is the way R. S. solves the question for the buyer, but how is it with the seller? When he is obliged to take $25 an acre for a farm of the *same quality* as another which sells for $100 per acre, because the latter is at less cost for transportation, does he not lose $75 per acre in paying the expenses of transportation for his successor? One of the fundamental difficulties with the writers in behalf of foreign trade is, that they always contemplate only the case of the man who is to buy, and spend no reflection upon that of the man who is to sell. The London *Times* expressed the idea very ingeniously a few weeks ago when discoursing of the advantages of low wages as "contributing vastly to the improvement and power of the country, to the success of all mercantile pursuits, and *the enjoyment of those who have money to spend*."

But suppose our purchaser to have got his farm for $25 per acre, and having, according to the supposition of R. S., a few thousand dollars at command, to invest them in the construction of a railroad, which diminishes the cost of transporting his products to market one-half. It is clear that R. S. has no doubt that by so doing he will add at once $37\frac{1}{2}$ per acre to the value of his farm, that being half the sum he reserved by reason of the extra cost of transportation before the construction of the railroad. I reckon that he will calculate upon getting the ordinary rate of profit on his railroad stock beside. If I am mistaken in thinking R. S. can have no

doubt of the fact, it must be because he has not observed what is matter of every day's experience. He cannot look into the market article of his newspaper a single morning without being able to calculate the cost of transportation on a bushel of corn to the minutest fraction of a cent, by comparing its prices at different stages of its progress; at Toledo, for example, at Buffalo, at Albany, and at New York. I remember seeing within a single month, in 1849, two instances in the same State, in which the completion of a canal, in the one case, of the railroad from Springfield, Illinois, to the Illinois River, in the other, caused corn to jump at once from 15 cents to 25 cents a bushel at their respective termini. Who had previously paid the difference of ten cents, if not the producer? The consumer, certainly paid no more in consequence of diminishing the cost of carriage. But it is useless to waste space on this point. R. S. rather intimates that this is a matter of rent; but his great men, since Adam Smith, will all tell him that rent has nothing to do with the price of a commodity. The establishment of this proposition is one of the very great things on which their admirers rest their claims to immortality.

The next proposition on which there is a serious difference of opinion between us is in relation to the advance in the wages of labor. And here R. S. has referred me to a statement which explains the rationale of that advance so well that I feel under great obligations. It is an article in the *Merchants' Magazine*, for June, 1850, giving the statistics of Lowell mills for the preceding ten years. It is there stated that the wages of the operatives have decreased nearly 20 per cent *relatively* to the cloth produced, although wages remain at the same rate per hand. R. S. says *nearly:* but the prices for 1840 and those for 1850 are given at precisely the same figure. "In other words," says R. S., "the operatives of Lowell produce one-fifth more cloth for a less amount of money than they did ten years ago." To be somewhat more particular, the article states, that the average weekly product, per hand, per week, was in 1840, 131 yards, while in 1850 it was 175 yards—that the wages expended upon the fabrication of 1,000 yards of cloth, were, in 1840, $22 30, while in 1850 it was but $16 50. These items furnish an accurate measure of the pecuniary value of the increased efficiency in the quality of their labor attained by the workmen.

The *mode* in which that efficiency has shown itself, is thus stated by R. S. "The number of spindles and looms have increased, taking them together, at the rate of nearly one hundred per cent, while the hands employed have increased forty, showing that although wages are stated at only twenty per cent, relative reduction, it has required a much larger relative amount of machinery to be worked to the number of hands." There is a difference in the way the same facts may be stated and construed. According to my notion, this shows, that by dint of increased skill and improved machinery, one hundred and forty workmen have become able to tend a quantity of machinery represented by two hundred instead of only one hundred and forty, which would have exhausted their capacity, if they had continued no more efficient than in 1840. The consequence is, that each hand produces forty-four yards more of cloth, per week, for the same amount of wages. "Therefore," says R. S., "unless this machinery has been produced at less cost, (which appears to be the case by reference to the statistics,) the rate of profit on capital must also have decreased." My inference is, therefore, unless the cost of this machinery has increased in the ratio of 131 to 175, or about thirty-four per cent, (33.59,) some portion of these forty-four yards

go to swell the profits of capital, or else the 175 yards must be sold in 1850 for what, in 1840, would have purchased but 131. Any one who will examine the prices of the various descriptions of cotton goods for the several years from 1840 to 1850, will find that the latter supposition is the one that accords with the facts. Very copious information upon this point may be found in the tables appended to Secretary Meredith's Report, which give the price of the various products of all the great establishments of New England, but terminate with the year 1849.

The only light on the question of the cost of this machinery, furnished by the statistics to which R. S. refers, is in the statement that the capital of the Lowell mills was $10,500,000 in 1840, and in 1850, 13,210,000, an increase of 25.81 per cent.

The results may be presented in this way. Capital to the amount of $100 sets in motion a certain amount of labor, and gets back in return a certain number of yards of cloth. By an addition to that capital of $25 81, the same amount of labor produces, at the same expenditure for wages, 133.59 yards of cloth, instead of 100. The prices of cloth remaining the same, the capitalist will get $133 59, where he formerly got $100, and where, to maintain his former rate of profit, he should get but $125 81, being a gain of $7 78. This is more than six per cent (accurately it is $61 84 on $1,000) on the increased capital, *over and above* the old rate of profit on the original capital. If formerly the rate of profit was six per cent, under the new state of things it will have more than doubled, as no wages are payable out of the additional $33 59.

Now, no man requires to be informed that no such thing has happened. All the economists tell us that it is impossible that the profits of a particular employment should double or make any considerable approximation towards it, without such a rush into the business, and such an increase of competition, as to reduce them to the general level, or below it. The tendency of things, moreover, as Ricardo and his school tell us, is to a constant fall in the rate of profits.

Let us inquire what would naturally come to pass. The phenomenon is that 12,004 men and women, working at Lowell in 1850, turned out, every mother's son and daughter of them, forty-four yards of cloth more each week than in 1840. This is a clear gain to the human race of 528,176 yards per week, or some 27,000,000 yards per annum. Suppose a consultation were held upon the just and equitable division, between all parties, of the benefits of this achievement. In the first place, all would agree that, as the mill owners had to furnish one-quarter additional capital, they should take the same proportion out of the increased product; that is, out of every forty-four yards, they should take eleven, and thus just keep up their old rate of profits. If they should grumble, R. S. would be ready to tell them that it was more than they were entitled to in strictness, and according to the laws of capital, as expounded by all the great men since Adam Smith. "The rule," he would tell them, "is that your profits ought to have declined in ten years; if you are exempted from the common lot, you ought to be well satisfied." While they were searching their brains for an answer to this suggestion, the workmen would be calculating the cost of the workmanship upon the thirty-three yards remaining out of the forty-four; the *material* of which, of course, belonged to the mill owners. According to the tables cited by R. S., they would see that if the labor on a thousand yards cost $16 50, consequently, that upon thirty-three would come to fifty-

five cents. They would demand this much in addition to their weekly wages. "For," they would say to the mill owners, "it is absurd that we should get any less by reason of our working by the week, than if we worked by the piece. You, gentlemen, who have employed a multitude of hands, know that in the long run it comes to the same thing. You get the work that you pay for, and no more. There are ways of skirking that we do not care to do more than hint at in a distant way. Besides, machinery always gets out of order and costs a great deal in repairs, &c., &c., when we are underpaid, as you have doubtless observed. At all events, it is good for nothing without our aid." The mill owners, reflecting that their operatives could go when they pleased to Graniteville or Cannelton, would be disposed to accede to the demand. But here R. S. would interpose, and this time, on behalf of the mill owners. "Consider, my friends," he would say, "the law of supply and demand. Reflect that you have been guilty of 'over production,' on a large scale—twenty-seven million yards extra, have been brought to market, which you will have to sell at greatly reduced prices. You have increased the supply thirty-three per cent. You will have to reduce the price in some similar proportion—call it twenty-five per cent. And you, working men and women, reflect that the fifty-five cents extra wages that you count, exists not in money, by a long shot, but in cotton cloth. If you will not take the cloth itself, you ought at least to submit to the same depreciation on the money that you would on the cloth." If the operatives hesitated long, he would be moved to reproach them. You rascals, he would think, if he did not say, it is clearly against the rules of Political Economy that your wages should rise—they ought to be falling all the while—you should be coming nearer and nearer to the starvation scale of pay every day, and ten years, with such growth of population and capital as this country has exhibited, ought to have made you lean and meek. Mr. Malthus proved it to a demonstration, you ignorant extortioners. It is very like that they would consent to have twenty-five per cent docked from the fifty-five cents advance that they asked. Possibly more, for if they have not read Malthus, they have had the advantage of hearing his doctrine expounded at the lectures of the Lowell Institute. I am willing to believe that they would submit to a further reduction of thirty per cent, as the effect of those lectures, so that the girl who had $2 00 a week in 1840, should now get but $2 25, instead of $2 40, which she might otherwise have insisted upon. Fifteen cents a week is cheap for a course in Malthus.

Now let us see how the case stands. The mill owner keeps up his rate of profit, and inasmuch as his operatives are better paid, they work more faithfully, improve faster themselves, and invent more improvements in machinery, so that, when 1860 comes round, it will be found that the profits have increased, and there will have to be a new adjustment of prices.

The operative gets twenty-five cents additional wages per week, and when she leaves the mill to be married, (they will do it in spite of Malthus,) and is collecting her outfit, she finds that her money will buy 25 per cent more of calicoes, and sheetings, and other cottons, than her sister, who left the mill in 1840, could purchase for the same sum. Even if she gets but $2 a week, the same *money*-wages as her sister got, it will go as far as $2 50 would have done ten years before. Her *real* wages, the effective value of her labor, has increased, even if nominally, and estimated in coin, they have been stationary.

Finally, every consumer of cotton goods obtains them at a greatly reduced price, and, therefore, has the ability to purchase more, or if not desiring more, has so much more money applicable to the supply of other wants, and to stimulate and reward labor in another department.

I have dwelt upon the facts referred to by R. S. chiefly to show the *rationale* of the progressive increase of wages, and how such increase takes place, not only without detriment to any other class, but to the common advantage of all. It is not of importance that I should be accurate in stating the respective proportions in which the advantages of the increased efficiency of labor, arising from its being aided by an increased amount of capital, are distributed between the laborer, the capitalist, and the body of consumers. Nor is it of consequence that these proportions are adjusted by the silent workings of natural laws, instead of being matter of conventional arrangement. I must dismiss the examination into the reason of the things, and the *modus operandi*, to look a little at the bare question of fact—have the wages at Lowell risen since 1840?

The statement to which R. S. referred, may be found in vol. xxii. of the *Merchants' Magazine*, at page 646. It is an editorial article. After the tabular statement, in which it appears that the wages of 1840 and 1850 are *precisely* the same, the writer goes on to say:—"During the past year there has been a *growing difficulty in procuring hands*, and many looms have been idle from the *impossibility of procuring them at such wages as would leave any profit.*" In other words, the same wages paid in 1840 would no longer command hands to keep the looms going. This shows that labor was rising, and was commanding higher wages in other employments, which took men from the looms. Moreover, it is stated that the mills are filling more and more with immigrants; that Irish girls are taking the places of Yankees, and the latter are leaving to give place to fresh importations from the Green Isle. This shows that the wages stated in the table are paid to an inferior class of laborers—less skilled and instructed. It no more disproves an advance of wages than would the statement that a land surveyor, in 1840, obtained the same wages that his chain-bearer did in 1850. Moreover, I have undertaken no such task as to show that wages advance so regularly as that the difference shall be perceptible in ten years at Lowell, or anywhere else. The question respects a law which works slowly but constantly, except for violent interruptions. The contrast is exhibited between generations or centuries, not successive years. Who can detect the growth of an oak in ten years?

Nevertheless, the facts referred to by R. S. answer my purpose well in exhibiting the operation of the law. What has happened at Lowell, has been happening over the world from the beginning of time, and what is true of the effect of improvements in the spinning of cotton, is true in every other department of industry. Everywhere as population has grown, capital has grown with it, but faster, and that capital has consisted of more and better tools. Each generation has the aid of more capital in improved machinery than its predecessor, and, as a consequence, accomplishes more by the same amount of labor.

That this has been the case in the mechanic arts will not be denied, nor can it be that the effect has been a vast increase in the wages of labor, measured by the manufactured products which they can command. In an article in this Magazine for January, 1850, it is stated that "in 1814 and to 1818, a woman's labor for one week would enable her to buy but one yard

of ticking. Now it will buy twenty-three yards. Then she earned two yards of sheeting with a week's work; now, thirty-five yards—then, two and a half yards of calico; now, thirty yards—then, two and a half yards of shirting; now, thirty-nine yards. Women's wages have risen nearly or quite three-fold, and men's have doubled." I take this statement as illustrating, rather than proving, an advance of wages, made up of two constituents; first, an increase in money payment; second, an increase in the amount of necessaries which the same money will command—the latter constituent exceeding the former.

R. S. intimates a suspicion that the wages per hand have not been fairly stated, in the table to which he himself referred me, "*or they would have exhibited a further decline;* and further, the increased production has been caused by an increased application of labor per individual, and not by any improvement in machinery." What he calls a decline in wages is, that "the operatives at Lowell produce one-fifth more cloth for a less amount of money than they did ten years ago." If, in this sense, the tables represent the relative decline of wages, that is, the increased efficiency of labor, inadequately, so much the better for my argument. If he means by an increased application of labor, an increase in the hours of labor, I should like to see the evidence of it. Elsewhere, the tendency has been to a reduction in the hours of labor. His suggestion gives me the opportunity to quote the following statement from the *Edinburg Review* for last April—certainly unimpeachable free-trade authority—which also bears upon other points in our discussion:—

"Mr. Porter has ascertained, from the tables kept at the Greenwich Hospital, that the wages of *carpenters* had risen from 18s. a week, in 1800, to 29s. 3d., in 1836; of *bricklayers*, from 18s. to 29s. 9d.: of *plumbers*, from 19s. to 30s. In the same period the earnings of *London compositors* in the book trade had risen from 33s. to 36s. We have ascertained that they remain the same. The earnings of compositors employed on the morning papers had risen from 40s. to 48s. a week. They are now at the latter amount. From evidence published by a Committee of the House of Commons in 1833, added to such information as we have been enabled to obtain up to the present period, we give as fully reliable the following table of the earnings of a spinner of cotton yarn No. 200 at these several dates:—

| | Weekly net earnings. | Pounds of flour these could purchase. | Pounds of flesh meat these could purchase. | Hours of work. |
|---|---|---|---|---|
| In the year 1804 ..... | 32s. 6d. | 117 | 62 | 74 |
| " 1833 ..... | 42 9 | 267 | 85 | 69 |
| " 1850 ..... | 40 0 | 320 | 85 | 60 |

"If the hours of labor had been reduced between 1833 and 1850 only in the same proportion as his wages, the spinner would work 64½ hours instead of 60 per week. If he had been paid the same wages per hour in 1833 as in 1850, he would have received 46s. per week instead of 42s. 9d."

Now, while such results can be more readily detected and specified in those departments of industry, in which complicated and expensive machinery has been employed, because in regard to them we have more ample statistics, yet they are equally certain in those employments which are aided only by the more simple and cheap tools. In both cases the proportion retained by the laborer, out of the products of his toil, increases, while that which goes to remunerate the capitalists, for the use of the tools and machinery he has furnished, diminishes. Mr. Bigelow, in his very interesting book, "Jamaica

in 1850," describes the ax used by the negroes for cutting fire-wood, as "in shape, size, and appearance, more like the outer half of the blade of a sythe, stuck into a wooden handle, than anything else I can compare it to. With this long knife, for it is nothing else, I have seen negroes hacking at branches of palm for several minutes, to accomplish what a good wood-chopper, with an American ax, would finish at a single stroke."

The same writer quotes, approvingly, the statement made in a lecture delivered at Kingston, by Mr. W. W. Anderson, a resident of the island, in which he contrasts its mode of cultivation by the hoe, with our implemental husbandry, and says, "a single man, with his little one-horse plow, is sent to the field alone, and, in a day, he does the work of fifteen of ours." Wages for men on the coffee and sugar plantations, according to Mr. Bigelow, range from eighteen to twenty-four cents a day, out of which the laborers have to board themselves, paying, at the largest market on the island, from sixteen to eighteen dollars a barrel for flour, thirty-eight cents a pound for butter, from three to five cents a piece for eggs, and twenty-five cents a pound for hams. Furnish the negro wood-chopper with the American ax, and it is even more evident that the proportion which his wages, while using it, will bear to the total value of his work will be much greater than at present, than it is that the proportion of the cloth earned by the Lowell spinners and weavers has increased by the use of improved machinery. It is more evident, because the labor of a very few days will enable the negro to buy an American ax, and earn the highest wages by working for himself, whereas, it requires an extensive combination of spinners and weavers to command the ownership of cotton machinery, and enable them to enter into competition with their old employers, if the latter do not consent to give them that increased proportion of the cloth spun and woven, to which their increased efficiency has entitled them. The contrast between wages of cotton spinners in 1814 and 1850, measured, in both instances, in cloth, shows how largely their proportion of the product has increased. In the least favorable case, according to the statement, a woman gets twelve times more calico for a week's work now than she did between 1814 and 1818; of sheeting she gets seventeen times as much; of shirting, about sixteen times. Every body knows that while labor produces much more of these fabrics now than in 1814, the increased productiveness is in no such ratio as the lowest of these numbers. And if we divide them by two, or even by three, to compensate for the decline in the cost of the raw material, it will still appear that a much larger proportion of the cloth spun goes to the laborer, and consequently a less proportion remains for the capitalist than in 1814–18. If this can be effected by improvement in cotton mills, much more can it be, and has it been, by improvements in axes, and plows, and hoes, and the other implements of tillage, which have been going on since the world began.

I might specify a great variety of improvements in the methods of cultivation, in drainage, in manures, in the rotation of crops, in securing them when gathered, and in transporting them to market, which, concurring with improved tools, have increased from age to age, as population and capital have grown: the productiveness of agricultural labor; that is to say, have given so much greater a return per head, to the persons employed, as after providing each of these with an increased share of the crops, thus increasing their wages and their comforts, to yet leave an enlarged quantity to the capitalist or land owner. But I prefer to offer testimony upon this point which came to my hands, after my contribution to your July number, from an eminent

free-trade authority, who, perhaps, ranks as the ablest statistician in Europe. The *Annuaire de L'Economie Politique et de La Statistique* for 1851, pages 368 to 385, contains a paper by A. Moreau de Jonnes, member of the Institute, &c., on the condition and wages of the agricultural classes in France. He states, that for twenty-five years he has been laboring in the collection of the statistics of the agriculture of France, since the era of Louis XIV., from historical, economical, and administrative documents, and in the comparison of them with those of the present day. He gives the general result in the following tables, referring to a more elaborate work for the circumstantial details.

The first table contains a statement of the aggregate expenditure, at different epochs, for the cultivation of the soil of France, (excluding the value of the seed,) in millions of francs—of the proportion which the sum total of wages bore to the whole value of the product of the soil—and of the amount per head to the actual population of the kingdom, at each epoch, of such expenditure, as follows :—

| Epoch. | Cost of cultivation. *Francs.* | Proportion to the entire product. *Per cent.* | To each inhabitant. *Francs.* |
|---|---|---|---|
| 1700, Louis XIV..... | 458,000,000 | 35 | 24 |
| 1760, Louis XV..... | 442,000,000 | 37 | 21 |
| 1788, Louis XVI..... | 725,000,000 | 43 | 30 |
| 1813, The Empire ..... | 1,827,000,000 | 60 | 61 |
| 1840, France of the present.... | 3,016,000,000 | 60 | 90 |

The following statement gives the division of wages among the agricultural families of the kingdom, at the same period, upon the estimate that they averaged four and half persons to a family, giving the annual wages of each family, and the amount per day for each family :—

| Epoch. | Number of agricultural families. | Annual wages. *Francs.* | Daily wages of each. |
|---|---|---|---|
| 1700..... | 3,350,000 | 135 | 0 franc 37 centimes, or 7½ sous. |
| 1769..... | 3,500,000 | 126 | 0 " 35 " 7 " |
| 1788..... | 4,000,000 | 161 | 0 " 45 " 9 " |
| 1813..... | 4,600,000 | 400 | 1 " 10 " 22 " |
| 1840..... | 6,000,000 | 500 | 1 " 37 " 27 " |

M. De Jonnes compares these prices of labor with those of wheat, for the purpose of seeing how far they would go in the respective periods towards supplying the prime necessities of life. He reckons that thirteen and a half *hectolitres* (the hectolitre is $2\frac{83}{100}$ bushels) of wheat has been about the quantity of grain needed for the consumption of a family—needed more during the earlier than the latter periods, because its want is now, in a great degree, obviated by a variety of garden vegetables, formerly unknown or very little cultivated. He constructs a table giving the mean price of wheat, deduced from an average of the market for long series of years, under each reign, as follows :—

| | Mean price per hectolitre. |
|---|---|
| Under Louis XIV., average of 72 years..... | 18 francs 85 centimes. |
| Louis XV., " 60 " ..... | 13 " 05 " |
| Louis XVI., " 16 " ..... | 16 " 00 " |
| Empire, " 10 " ..... | 21 " 00 " |
| Constitutional Mon'chy, 10 " ..... | 19 " 03 " |

The result of a comparison of the annual earnings of a family of agricultural laborers, with the cost of thirteen and a ha'f *hectolitres* of wheat, required for their annual consumption, is given in the following table :—

| | Wages. *Francs.* | Cost of 13½ hect's. *Francs.* | | *Francs.* |
|---|---|---|---|---|
| 1st period ..... | 135 | 254 | deficit.... | 119 |
| 2nd period..... | 126 | 176 | deficit.... | 50 |
| 3d period..... | 161 | 216 | deficit.... | 55 |
| 4th period..... | 400 | 283 | excess.... | 117 |
| 5th period..... | 500 | 256 | excess.... | 244 |

During the reign of the *Grand Monarcque*, the rural population of France wanted bread half of the time. Under the sway of Louis XV. it had bread two days out of three, but sufficient progress had been made under Louis XVI. to give it bread three-fourths of the year—while under the Empire and the rule of the Citizen King, wages were sufficient to supply the laborer with bread through the year, and leave a surplus towards procuring other food and clothing.

These tables show the great improvement which has been going on in the condition of the agricultural laborers of France, from a rise in the absolute amount of their wages, and in the *proportion* which they bear to the entire product, and to the share of the capitalist. The proportion to the entire product has almost doubled in one hundred and fifty years, having risen from 35 per cent to sixty. As between the laborers and the capitalists it was, in 1700, 35 per cent to the former, and sixty-five to the latter. It is now 60 per cent to the former, and forty to the latter, who, instead of getting two-thirds of the product, twice as much as the laborers, now get but two-fifths, leaving the laborers 50 per cent more than the capitalists. But, although the latter get a diminished proportion, the increased efficiency of labor and capital has made the crop so much greater, that this diminished proportion yields an amount, not only absolutely greater, but greater relatively to the increased population. This is readily shown by a few figures, deduced from the tables of M. Jonnes. Taking for comparison the two extremes, we find the following results :—

| | Total population. | Agricultural population. | Paid to agricultural laborers. *Francs.* | Total product. *Francs.* | Leaving for the remainder of pop'n. *Francs.* |
|---|---|---|---|---|---|
| 1700 | 19,500,000 | 15,000,000 | 458,000,000 | 1,308,000,000 | 850,000,000 |
| 1840 | 36,000,000 | 27,000,000 | 3,016,000,000 | 5,025,000,000 | 2,009,000,000 |

From this it appears that notwithstanding the laborers are so much better paid—three and two-third times more than in 1700—(or rather *because* they are so much better paid,) the remainder, left to be divided among the capitalists and non-agricultural classes, is larger than before, and they fare better also. The entire population of France lacks three millions of having doubled, while the crop has nearly quadrupled; so, that on an equal distribution, there is twice as much for each mouth now, as in 1700. But looking to the actual distribution now, and then, we see, that while the non-agricultural population has increased 100 per cent, the surplus left, after paying the agricultural laborers their increased wages, and enlarged proportion, has increased 127 per cent. This is the state of the case, the comparison being made in money. If it is desired to estimate it in food, we have the necessary elements of calculation, when we know that the mean price of wheat, at the first epoch, was 18 francs 85 centimes per hectolitre, while at the latter it was 19 francs 3 centimes.

R. S. says, that if it be a delusion, that wages and profits decline, he has been deceived in good company—that we cannot take up a newspaper in which we do not find some allusion to the wretched condition of the working classes. Lest he should suspect me of being ignorant of their present

condition in France, I give the following translation from Blanqui's Report to the Academy of Moral and Political Sciences, on the state of the rural population.

"Those alone who have seen it, can believe the degree in which the clothing, furniture, and food of the rural population are slender and sorry. There are entire cantons it which particular articles of clothing are transmitted from father to son; in which the domestic utensils are simply wooden spoons, and the furniture a bench and a crazy table. You may count, by thousands, men who have never known bed-sheets, others who have never worn shoes; and by millions, those who drink only water, who never eat meat, or very rarely—nor even white bread."

I know that the condition of the laboring classes in England is bad enough, and that of those in France still worse. But, bad as they are, I know them to be vastly better than they have been. M. De Jonnes shows, most conclusively, how great has been the improvement in France, and his conclusions are corroborated by the most ample testimony from historians and travelers.

Mr. Carey's proposition, that wages rise in proportion, and in absolute amount, with the growth of population and wealth, was certainly advanced and defended by him, in 1837, with no purpose of favoring the protective policy, to which he was then and for ten years afterwards, or down to the publication of the "Past, Present, and Future," in 1848, opposed. I have not adverted to it, because of its bearing upon that policy. Its relevancy, however, in that point of view is this: it explains how it comes that high wages coëxist with cheap products, and indicate cheap labor, instead of being a sign that labor is dear. "Cheap food," says R. S., "must be bartered for cheap labor," and, in this, Mr. Carey and myself agree with him heartily. American labor is the cheapest under the sun. It is the best paid, because it is the cheapest, that is, the most effective, and produces the most. The English economists, McCulloch and Mill, see, and rejoice in the fact, that the labor of their countrymen is cheaper than the labor of Ireland, or the continent, although paid at so much higher rates. It is plain, that as labor and capital concur in bringing to market everything which reaches it, so the remuneration of both is derived from a division of the price for which it sells. If both are found regularly receiving back higher wages, and higher profits in one country than another, it is becanse they are more effective in the former; that is, a given quantity of each makes a larger product for sale, and is, therefore, cheaper to the purchaser. Instead, therefore, of being deterred from competition with England, in manufactures, because both wages and profits are high with us, and low with her, it is the very reason why we may be assured of success. They are mistaken, who ask for protection against the low wages of Europe, we want protection against its labor, because it is costly and dear, and we want it for American labor, because it is cheap. "Cheap food must be bartered for cheap labor," and that it cannot be unless it is bartered at home.*

* "The laborer there (in the United States) enjoys a greater abundance of comfort than in any other country in the world, except some of our newest colonies; but, owing to the cheap price at which these comforts can be obtained, (combined with the great efficiency of the laborer,) *the cost of labor to the capitalist is considerably lower than in Europe.* It must be so, since the rate of profit is higher, as indicated by the rate of interest, which is 6 per cent in New York when it is 3½ per cent in London."

J. S. Mill's Political Economy, vol. i, page 501. Boston edition.

Mr. Mill here talks as if American wages, estimated in money, were no higher than in Europe—which we all know to be contrary to the fact—as if they were only greater because the same money

If the progress of labor and capital, with advancing population, is marked with a relative increase in the power of labor, and diminution in that of capital, then the tendency must be towards an equalization of wealth. I referred to the statistics presented by Mr. Porter, an eminent free-trade authority, at the meeting of the British Association for the Advancement of Science, in August 1850, as containing some evidence that this tendency had been visible, and could be detected, even in England, for the last fifty years. I was well aware that I was tempting a very unfavorable test. The proposition related to the *natural* tendency of things, but this tendency has been sedulously counteracted by the policy of the British Government, inculcated by the economists of the Malthus school. "For a whole generation," said the *London Times*, a few weeks ago, "*man has been a druge* in this country, and *population a nuisance.*" Under the rule of a system, based upon such ideas, we should look for little evidence in support of a truth which is inseparably connected with the American axiom, that population is wealth. I referred to Mr. Porter's tables simply because they were in print, and accessible, and because, by so doing, I could economize space in your pages. As R. S. does not chose to produce them I think it proper to do so. I ought to say, further, that Mr. Porter seems to have no idea whatever that he is supporting any theory, on the contrary, he presents facts which have struck him as anomalous, and contrary to the popular belief, as well as to the teachings of the received economists of England.

His declared object was to ascertain the proportion in which the wealth of different classes has increased, so far as it can be gathered from the few public sources of information, whch were within his reach as the head of the statistical department of the Board of Trade, of which he is also secretary. His first examination was into the amount of deposits in the savings banks. These are a creation of the present century—the first having been instituted at Tottenham, by Mrs. Priscella Wakefield, in 1804. In Scotland they are of so recent use (owing, in a great measure, to the more liberal management of the ordinary banks) that he excluded that country from the comparison. In England, Wales, and Ireland the depositors, who numbered 412,217, in 1830, had increased to 970,825, in 1848; and the amount deposited had advanced from £13,507,568 to £27,034,026. Comparing the total amount deposited, with the population of England, Wales, and Ireland, at the respective periods, and reducing sterling to federal currency, it appears, that in 1831 the amount deposited was $3 06 per head; 1836, $3 95; 1841, $4 80; 1848, $5 06.

In 1846, the amount was as high as $5 80. It fell off in consequence of the Irish famine, and inasmuch as it is only during the present year that the great decrease in the population of that island has come to light, in the authentic returns of the census, it is quite possible that Mr. Porter's calculations require such a revision as would show that, relatively to the population, the diminution in the amount per head deposited between 1846 and 1848 is much less than we believed a year ago. The deposits in the savings banks are obviously to be regarded as an accumulation of property by the humbler classes. It ought to be stated that, in addition to the amount of deposits

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will buy more food. He cannot understand how it comes, that profits are higher, and wages higher too, in this country than anywhere else on the globe. Neither he nor any body else of the free trade school can comprehend how the interest of the capitalist and the laborer are in harmony with those of the consumer, who pays both well, because they furnish, and in order that they may furnish, commodities cheaply.

standing in the names of individuals, the sum deposited in the savings banks, and in the hands of the National Commissioners, amounted, in 1849, to £3,356,000. This, too, is the savings of the poorest class, who are self-supported.

The next test is found in the accounts furnished to Parliament of the number of persons receiving dividends upon portions of the public debt. These divide the fund holders into ten classes. The number in each are thus contrasted, fund holders receiving at each payment—

| | 1831. | 1848. | Increase, per cent. | Diminution, per cent. |
|---|---|---|---|---|
| Not exceeding £5 ..... | 88,170 | 96,415 | 9.35 | .... |
| " 10 ..... | 44,790 | 44,937 | 0.33 | .... |
| " 50 ..... | 98,320 | 96,024 | .... | 2.33 |
| " 100 ..... | 25,694 | 24,462 | .... | 4.79 |
| " 200 ..... | 14,772 | 13,882 | .... | 6.02 |
| " 300 ..... | 4,527 | 4,032 | .... | 10.93 |
| " 500 ..... | 2,890 | 2,647 | .... | 8.41 |
| " 1,000 ..... | 1,398 | 1,222 | .... | 12.59 |
| " 2,000 ..... | 412 | 328 | .... | 20.38 |
| Exceeding 2,000 ..... | 172 | 177 | 2.90 | ..... |
| Total..... | 281,145 | 284,127 | | |

The increase in the last item is stated to be caused by the insurance offices investing largely in the funds.

The next branch of inquiry to which Mr. Porter directed his attention was the sums assessed to the income tax, in respect to incomes derived from trades and professions in 1812, compared with 1848. From the former period he excludes the incomes below £150, because these are not taxed by the existing law. The total amount thus assessed, after deducting exemptions, was, in 1812, £21,247,621; while in 1848 the amount was £56,990,224, showing an increase of 168.21 per cent, being at the rate of 4.67 per cent yearly—" an increase," he remarks, " very nearly three fold greater than the increase during the same period of that portion of the population of the United Kingdom which is subject to the income tax. The following table, giving the number of persons assessed in different classes, shows the increase in the number of moderate, and a comparative diminution in the number of colossal incomes ;"—

| | 1812. | 1848. | Increase, per cent of persons. | Total inc'e of incomes assessed. |
|---|---|---|---|---|
| Incomes between £150 and £500..... | 30,732 | 91,101 | 196 | £13,724,946 |
| " 500 1,000..... | 5,334 | 13,287 | 148 | 5,100,540 |
| " 1,000 2,000..... | 2,116 | 5,234 | 148 | 4,078,095 |
| " 2,000 5,000..... | 1,180 | 2,586 | 119 | 4,059,748 |
| 5,000 and upward.... | 409 | 1,181 | 180 | 779,275 |

In the highest class of all, the average income must have decreased; for as there are 772 additional incomes, each of which is £5,000 and upward, they must have added at least £3,860,000 to the total sum assessed, if the incomes of the original members of the class had remained stationary. But as the total increase is but £779,275, the deficiency of £3,080,725 must result from a diminished average.

Mr. Porter next examines the returns showing the sums upon which probate duty has been paid, in respect of personal property left by persons deceased. Between 1833 and 1848 the amount assessed on estates up to £1,500 had increased 15.56 per cent; between £1,500 and £5,000, 9.21

per cent: between £5,000 and £10,000, 16.38 per cent; between £10,000 and £15,000, 6.36 per cent; of upward of £15,000, 7.20 per cent; while the amount of duty received on estates of £30,000 and upward, has been slowly but steadily decreasing.

In order to give their proper weight to the facts collected by Mr. Porter, we ought to take into account the population of the British islands at the periods to which they relate. Thus, between 1812 and 1848, the population increased about 50 per cent: according to the theory of Malthus and R. S. the number of persons having incomes between £150 and £500 ought to have increased in a *lower* ratio, but in point of fact it has increased three fold. There ought to have been less than 46,000 of them, while there were 91,101, or twice as many as the law of the English economists allows.

But it would require too much of your space to dwell further upon this point. Enough has been said to prove to every candid reader that it is at least worthy of examination, whether Mr. Carey is not right. I should be glad to point out the bearings of the law of distribution discovered and announced by him upon the philosophy of history and politics—to show, for example, how it explains the fact that the laboring class in England, as everywhere else, originally slaves, a staple of export to Ireland and Scotland, until the Pope interposed to prevent the scandal of sending Christians abroad for sale, have passed from *villains in gross* to the better condition of *villains regardant;* that is, annexed to the land and only saleable with it—from that to the condition of the freeman, capable of possessing property and having personal, but without political rights, and thus continually upward—how the middle class, of which historians talk so much, grows by accessions from below, by persons climbing up from the *status* of laborers without capital to that of laborers with little capital, and then with more—how the power of a landed aristocracy is superceded by the millocracy in England, and the *noblesse* by the *bourgeoisie* in France—things impossible and incomprehensible according to the Malthus-Ricardo theory of rent—how, in short, it is the law of Progress and of Democracy. But enough for the present. There are other points in the article of R. S., which will require notice in another number.

E. P. S.

## Art. II.—COMMERCIAL CITIES AND TOWNS OF THE UNITED STATES.

NUMBER XXVII.

### TRADE AND COMMERCE OF NEW ORLEANS IN 1850-51.

INTRODUCTORY REMARKS—ANNUAL REVIEW—THE COTTON MARKET—PRICES OF COTTON AND RATE OF FREIGHTS—PRODUCTION OF COTTON—STOCKS, ETC., OF COTTON—MIXED COTTON—SUGAR MARKET—PRICES, AND CROPS OF SUGAR—MOLASSES—TOBACCO—WESTERN PRODUCE—PRICES OF FLOUR AND CORN—PORK AND LARD—PRICES OF PORK, BEEF, AND LARD—LEAD—HEMP—COFFEE—EXCHANGES—FREIGHTS, ETC.

In a former volume of the *Merchants' Magazine*,* we gave a sketch of the commercial and industrial history, together with full statistics of the trade, &c., of New Orleans for a series of years. It will be recollected that in a previous number (October, 1851) we published, under the above gen-

* See "Commercial Cities and Towns of the United States," in *Merchants' Magazine* for November, 1848, (vol. xix., pp. 503-518.

eral head, the *Cincinnati Price Current's* annual report of the trade and Commerce of that city (Cincinnati) in 1850–51; remarking, at the time, that it was well known that several *Price Currents* and mercantile journals in the leading cities of the United States, were in the habit of giving at the close of each commercial or calendar year, an annual report or resume of the Trade and Commerce of the year; and that these reports embraced a comparative view of the progress of trade and Commerce, which imparted to them not only a present but a prospective, and even historical value.

As the reports of the *New Orleans Price Current*, a model journal of its class, are uniformly made up with industry and ability, and generally present a faithful record or review of the commercial transactions of the year, we do not deem it necessary to make any apology for reproducing, in this place, a report of the Trade and Commerce of New Orleans, for the year ending August 31, 1851, as we find it in the columns of that print.

Our usual annual statement of the Commerce of New Orleans will be found to contain a mass of commercial statistics of great value to all producing and trading interests, and also a brief history of the course of the market during a year of extraordinary vicissitudes, at least so far as relates to our most prominent export staples. Before entering, however, upon a review of the operations of the season, we may be permitted to devote a brief space to the consideration of a subject to which we have frequently before alluded in a similar connection; namely, the necessity of railroads for the increase and prosperity of our city. This necessity has now become so manifest that we are happy to see an awakened spirit in our population, which we trust, ere long, will give evidence of practical results. Already have conventions been held, and several important roads projected, with favorable promise of being carried forward, if persevered in. To this end, an address has been issued by a committee of the late convention, showing the vast advantages likely to ensue from a proper system of railroads, and inviting the people of the Southern and Western States to meet here in convention on the first Monday in January, "to deliberate upon and concert such measures as will be likely speedily to influence the construction of a system of railroads, connecting the Gulf States with those of the West and North-west, and radiating throughout all the interior." The advantages of such a system are ably set forth in the address, and we trust it will be productive of the results contemplated. Immediate progress is obstructed by legislative restrictions, but these will doubtless be removed at the coming session of the Legislature. It will be a proud day for New Orleans when, in addition to her thousands of miles of navigable rivers which, unfortunately, have too long been her exclusive dependence, she can look out upon her hundreds of miles of railroads, connecting her with all parts of the interior, and drawing to her lap the varied products of extensive and rich sections of country, that are now dormant from the want of ready and cheap avenues to a market. This day may be seen, with the exercise of proper enterprise and energy, aided by enlightened, just, and safe legislation, and we trust its dawning time is not far distant. We have no space to enter into statistical statements on the subject; but would respectfully recommend a general perusal of the address above referred to, as it will be found to contain a mass of information, of a character both interesting and valuable. Other subjects of general interest claim attention, but our space would barely admit an enumeration of them, and we pass on to a review of the season's operations in our leading staples.

The value of products received from the interior since 1st September, 1850, is $106,924,083 against $96,897,873 last year. The value of the exports of domestic products for the year ended 30th June last, according to the Custom-house records, was $81,216,925 against $71,049,556 last year. Of this amount, $53,988,013 was to foreign ports, and $27,228,912 coastwise. The value of foreign merchandise exported during the same period was only $445,950. The operations of the Branch Mint have been greatly extended, the total deposits of

gold and silver for the year ended on the 31st July, being $9,107,722 against $4,038,341 last year. Of the gold, $8,152,878 was from California. The coinage in the same time has been, of gold, $8,994,000, and of silver, $1,050,500—total, $10,044,500.

COTTON. It is well known that in this leading branch of our Commerce, the season opened with high hopes on the part of both producers and dealers. The previous year had closed upon greatly enhanced prices, which has given large profits to shippers, and this success, together with calculations of another short crop, stimulated speculation to an imprudent degree, and the result has been a reaction more disastrous than any that has occurred in the cotton trade since 1825. A brief summary of the season's operations will show the course of the market.

The first bale of the new crop (some 250 lbs.) was received here on the 11th August, being four days later than the first receipt of the previous year; and so backwark was the crop that, up to the 1st September, only sixty-seven bales had come to market, notwithstanding the prevalence of comparatively high prices, a few bales having been disposed of at 13¼ a 15 cents per lb. During the greater part of September the quotation for a strict class of middling was 13 cents, but toward the close of the month supplies began to arrive pretty freely, and the price fell off to 12¼. This slight decline was soon recovered, however, under an active demand, and about the middle of October our quotation for strictly middling was 13¼ cents, being the highest point of the season. From the middle of October to the middle of December, prices were quite steady, the range for middling being 13¼ a 13½ cents, but at the latter period unfavorable European advices produced a decline of ⅛ a ¼ cent per pound. This reduction caused a resumption of business, and the advices from Europe becoming more favorable the market recovered to 13½ cents by the early part of January. About the middle of the same month, however, under the pressure of heavy receipts and a stringent money market, prices began to give way again, and being assisted in their downward inclination by advices of another of those extraordinary discrepancies in the Liverpool stock, to the extent of 60,000 bales, the figures for middling reached 12¼ cents by the 1st February. At this point there was a slight recovery, but it was only momentary, as, by the middle of February, the market was called upon to encounter the combined disadvantages of an unusually heavy stock, adverse accounts from abroad, advancing freights, and declining exchanges. Under the pressure of this combination of adverse circumstances, prices rapidly gave way, and by the early part of March our outside quotation for strictly middling was reduced to 10⅛ cents. Here the market reached a firmer point, the circumstances which produced this last decline having been reversed, and by the latter part of the month prices had recovered to 11¼ cents for middling. For a month succeeding, the rates fluctuated between 10⅞ and 11 cents, when early in May the market was again unfavorably affected by the character of the foreign advices, and also by the large increase in the receipts at the ports, as compared with the previous year; and, as nearly every circumstance that has arisen since has been of a nature to increase the depression, there has been a constant yielding of prices, until they reached 6¾ cents for middling Louisianas and Mississippis, or a decline on this description of nearly 7 cents per pound from the highest point—being more than 50 per cent. In the lower grades, which have formed an unusually large proportion of the receipts of the past season, the reaction has been still more marked, there having been sales which would show a difference of 60 to 70 per cent between the highest and lowest points. These descriptions of cotton, owing to their extraordinary abundance, have been comparatively depressed, and exceedingly difficult of sale, during most of the season. Indeed, it has been the common remark that no crop since that of 1843–44, (known as the "storm year,") has contained so large a proportion classing *Inferior*, and some planters have sent to market "bales of cotton" which proved to be trash or "motes," not worth the drayage from the levee. If the planting interest reaps any benefit from the swelling of the apparent receipts through the forwarding of such worthless stuff, the past season has probably afforded a good opportunity for its demonstration. The following tables will further illustrate the movements in our great staple:—

TABLE SHOWING THE QUOTATIONS FOR LOW MIDDLING TO GOOD MIDDLING LOUISIANAS AND MISSISSIPPIS, WITH THE RATES OF FREIGHT TO LIVERPOOL, AND OF STERLING BILLS, AT THE SAME DATE.

| | Low middling to good middling. | Sterling. p. c. prem. | Freights, per lb. |
|---|---|---|---|
| September 14, 1850 | 12¼ a 13¼ | 9 a 10 | 13-32 a 7-16 |
| October 2 | 12¼ a 13¼ | 8¾ a 9 | 13-32 a 7-16 |
| November 2 | 13¼ a 13¾ | 7 a 8 | 11-32 a ¼ |
| December 4 | 13 a 13½ | 7½ a 8½ | .... a 7-16 |
| January 1, 1851 | 12⅝ a 13¼ | 7½ a 8 | ⅜ a 13-32 |
| February 1 | 12 a 13 | 7 a 7¾ | ⅜ a 9-13 |
| March 1 | 9½ a 10⅝ | 7½ a 8¼ | ⅜ a 13-16 |
| April 2 | 10 a 11¼ | 9½ a 10½ | ⅜ a .... |
| May 3 | 9⅛ a 10½ | 9½ a 10½ | .... a ½ |
| June 7 | 8 a 9½ | 9½ a 11 | ⅜ a 7-16 |
| July 5 | 7¾ a 9½ | 8½ a 10½ | 5-16 a ⅜ |
| August 2 | 6½ a 8¼ | 8½ a 10 | 7-16 a .... |

TABLE SHOWING THE PRODUCT OF LOW MIDDLING TO GOOD MIDDLING LOUISIANA AND MISSISSIPPI COTTON, TAKING THE AVERAGE OF EACH ENTIRE YEAR FOR SIX YEARS, WITH THE RECEIPTS AT NEW ORLEANS, AND THE TOTAL CROP OF THE UNITED STATES.

| Years. | Total crop. Bales. | Receipts at New Orleans. Bales. | Average price per pound. Cents. |
|---|---|---|---|
| 1845–46 | 2,100,537 | 1,041,393 | 6⅞ |
| 1846–47 | 1,778,651 | 707,324 | 10 |
| 1847–48 | 2,347,634 | 1,188,733 | 6⅜ |
| 1848–49 | 2,728,596 | 1,100,636 | 6½ |
| 1849–50 | 2,096,706 | 797,387 | 11 |
| 1850–51, estimated | 2,350,000 | 995,036 | 11 |

The total receipts at this port since 1st September last, from all sources, are 995,036 bales. This amount includes 44,816 bales from Mobile and Florida, and from Texas by sea; and this being deducted, our receipts proper are shown to be 950,220 bales, in which are included 18,051 bales received direct from Montgomery, &c., Alabama. This, then, would show an increase in our receipts proper, as compared with last year upon the same basis, of 152,833 bales. The total exports since 1st September are 997,458 bales, of which 582,373 bales were shipped to Great Britain, 130,362 to France, 131,906 to the North and South of Europe, Mexico, &c., and 152,817 to United States ports. On a comparison of the exports with those of last year, there would appear to be an increase of 185,628 bales to Great Britain, 12,949 to France, 21,760 to the North and South of Europe, Mexico, &c., while to United States ports there is a decrease of 61,026 bales. The total receipts at all the Atlantic and Gulf ports, up to the latest dates received, as shown by our general cotton table, are 2,331,464 bales, and the crop, when made up by the New York Shipping List, will probably not vary much from 2,350,000 bales.

We have thus rapidly sketched the course of the market during a season of extraordinary vicissitudes, and such an one as we hope never to witness again. In glancing at the peculiarities of the season it may be safely remarked that its prominent feature, (and, as the sequel has proven, its prominent error,) has been an under-estimate of the production. This, as we have already intimated, led to the opening of the market at unfortunately high prices, which, under speculative action, were subsequently carried to a higher point than they have reached since 1839. These under estimates were to a greater or less extent general, and we think it may safely be asserted that a large majority placed the crop at or under 2,200,000 bales, while the bulk of the business during the first six or seven months of the season was done upon a basis of 2,100,000 to 2,150,000 bales. The estimates of very few parties were beyond what the actual crop is likely to be, and these were looked upon as so extravagant that their opinions provoked discussion and animadversion to a degree that has given them wide-spread notoriety. And thus is added another to the many examples of the fallacy of early esti-

mates of a crop whose culture occupies so broad an extent of country, embracing nearly every variety of soil and climate, and requiring many months to determine definitely the result. The error has been followed by most disastrous consequences, but that those who fell into it (and they embrace planters, factors, and purchasers,) were honest in their opinions, their own losses should be taken to demonstrate.

In viewing the causes of this astounding reaction the leading ones, of course, are the under estimates of the crop, and the consequent elevation of prices to what has proved to have been an extravagant point. But as a collateral one, growing out of these, we may mention that the entire or partial stoppage of many of our home mills, owing to the high prices of the raw material, and excessive stocks of manufactured articles on hand, threw an undue proportion of the supply upon the European markets. Thus Great Britain alone has not only taken the whole excess of our receipts over those of last year, but nearly 100,000 bales more, that, with moderate prices, would have been consumed in the United States. To Great Britain, therefore, the crop has been equal to one of about 2,450,000 bales, while at the same time there has been a material increase in her imports from Brazil, Egypt, and the East Indies. And besides this ample present supply, large estimates of our coming crop are indulged, which have had a marked influence in the depression of prices. Thus, once more the spinners gained the ascendancy, and for weeks panic, which loses sight of the laws of supply and demand, seemed to reign in the Liverpool market. It is gratifying, however, to observe that, notwithstanding the prevalence of comparatively high prices during a great portion of the first six months of the current year, the amount taken for consumption in Great Britain slightly exceeds the amount taken for the same purpose during a similar period last year, and by the last accounts the weekly average has reached 33,000 bales—the highest ratio of consumption yet attained in the history of the cotton manufacture. The following table exhibits the imports, delivery, stock, &c., in the whole of Great Britain for the first six months ended on the 30th June last, and a comparison with the same period in 1850.

| | | 1851. | | 1850. |
|---|---|---|---|---|
| Stock, 1st January .....bales | | 521,120 | | 558,390 |
| Imports, six months ..... | | 1,156,500 | | 940,862 |
| | | 1,677,620 | | 1,499,252 |
| Export, six months..... | 95,300 | | 119,800 | |
| Consumption..... | 776,120 | | 770,952 | |
| | | 871,420 | | 890,752 |
| Stock, June 30..... | | 806,200 | | 608,500 |
| Weekly average taken for consumption..... | | 29,851 | | 29,652 |

In France, also, and other European countries, the deliveries for consumption exceed those of last year, the United States being the only point where a decrease is shown.

In respect to the growing crop, which is now a matter of marked interest, we propose to sketch briefly its progress and present prospects, leaving to others the indulgence in estimates, which the past season, among many that have preceded it, has shown to be attended with very great uncertainty, and with very serious consequences. It is understood there was considerable increase in the breadth of land planted, but an unusually cold and backward spring retarded the growth of the plant, and it had made comparatively little progress up to the early part of May, when a favorable change in the character of the weather gave an impulse to vegetation. From this time up to the 1st July, the accounts from the country, with some exceptions, were favorable, though from the Uplands there was some complaint of a lack of sufficient rain. The plant generally, however, though small, was said to look healthy, and to give good promise; beside which, the crops were unusually "clean," the very lack of rain complained of having favored cultivation by preventing any excessive growth of grass and weeds. But now very serious complaints began to reach us from the Uplands, of the long contin-

uance of the drought; and as week succeeded week without any rain, except an occasional shower, in partial neighborhoods, these complaints were reiterated, and became more general, accompanied by representations that the very fair prospects which the crops presented up to about the 1st July, were blasted to an important extent, and that no subsequent combination of circumstances could fully recover them. For some weeks past, however, showers have been frequent, particularly in this immediate neighborhood, and in some parts of the interior heavy rains are reported, which, coming at so late a period, are said to have been rather prejudicial to the crops. The bottom lands are generally admitted to give excellent promise, but so many contingencies may yet arise, favorable or adverse, that calculation of the result would be mere conjecture. We make no estimates, but we will record it as our impression that, while the error of last year was an under-estimate of the crop, the error of the coming one is likely to be in the opposite direction.

With regard to the market prospects for the coming crop, we think they may be said to be fair for ready sales, at moderate prices. In Great Britain, particularly, all the leading elements of an active and prosperous trade would seem to be in combination; namely, low stocks of goods and of the raw material in the hands of the manufacturers, cheap food, abundance of money, and the world at peace. Already the ratio of consumption is greater than ever before attained, and even a further increase is not improbable. In our own country, too, there will soon, doubtless, be renewed activity, as the stocks of goods, which for a long time have been excessive, are much reduced, and the manufacturers are understood to be without any considerable stocks of the raw material. Altogether the prospect would seem to be favorable for fair returns to the planter, even with a large crop, and the chances are that the relation of consumption to supply will be such as to leave the leading markets without excessive stocks at the close of the season.

The first bale of new crop was received here on the 25th July, being seventeen days earlier than the first receipt of last year, and the total receipts of new crop up to this date are 3,155 bales, against 67 bales last year. Of this quantity there have been sales reported to the extent of about 2,509 bales, at a range of 8 a 8¼ cents for middling, and 8¼ a 9 cents for good middling to middling fair, and the market closes with a total stock, including all on shipboard not cleared, of 14,890 bales, of which about 11,000 bales are in factors' hands, embracing some 10,000 bales of old crop held under limits.

Mixed Cotton. We have, on former occasions, called the attention of planters to the existence of an evil which loudly calls for remedy. We refer to the culpable negligence of many whose duty it is to attend to the packing of cotton, as shown by the frequent discovery of mixed bales; namely, bales that are found to contain two, three, or more qualities and colors. This negligence often leads to vexatious reclamations, and sometimes to expensive law suits, as it generally happens that the discovery is not made until the cotton has reached the hands of the manufacturer at a distant market. Then, if any portion of the bale is found to be inferior in quality to the sample by which it was purchased, the whole bale is reduced to the value of the lowest grade found, and the difference reclaimed. Nor is this all, for reclamations are sometimes insisted on even when the purchase has been made by a sample of the lowest grade, on the ground that mixed bales are unmerchantable. Thus the planter not only loses the difference in price between the lower and higher qualities which careless packing has mingled in the same bale, but is called upon to pay that difference again. And beside all this, when the irregular packing is once discovered, as it must necessarily be, somewhere and at sometime, it throws discredit upon the planter's crop generally, and thus operates to his disadvantage. It sometimes happens that the discovery is made here, before sale, by drawing samples from different parts of a bale. When this is the case the factor can seldom obtain more than the market value of the lowest sample. The evil which we have here depicted, and which is not only attended with direct loss to the planter, but is also productive of many vexatious controversies, is venial in its character, and only reprehensible for the confusion it introduces into a most important branch of trade, and one that can only be con-

ducted with facility and economy upon the basis of good faith in the honesty and integrity of the planter. These virtues being accorded to him, he owes it to himself, to his factor, and to his purchaser to exercise more care and vigilance over those who have his interest in charge.

SUGAR. At the date of our last annual report the prospect was considered fair for a full average yield, as the weather for some three months previous had been of a remarkably favorable character for promoting the growth of the cane. Subsequently, however, the character of the season proved unpropitious, an extraordinary period of drought having ensued, which prevented the cane from yielding juice freely, and also delayed the grinding, from the lack of water for working the steam engines. Thus, the frost of the middle of November found an unusually large proportion of the crop exposed, and the two causes above noted, combined with damage from overflows, led to a material reduction in the expected product. According to the statement of Mr. P. A. Champomier, the crop of 1850–51 amounted to 211,203 hogsheads, weighing 231,194,000 pounds. Of this quantity, 184,372 hogsheads are stated to be brown sugar, made by the old process, and 26,831 hogsheads refined, clarified, &c., including cistern bottoms; and the whole is the product of 1,495 sugar-houses, of which 907 have steam, and 588 have horse-power. The falling off in the crop, as compared with that of the previous year, is 26,720 hogsheads, or 38,575,009 pounds.

The stock estimated to be on hand at the close of last year was 2,000 hogsheads, and this quantity being added to the crop, as above stated, makes a supply, in round numbers, of 213,000 hogsheads. As nearly as can be ascertained the distribution of this supply has been as follows: shipments out of the State by sea, (including an estimate of 10,000 hogsheads for the exports from Attakapas,) 57,000 hogsheads; consumption of the city and neighborhood, 15,000 hogsheads; taken for refining in the city and State, including cistern bottoms, 15,000 hogsheads; stock now on hand in the State, estimated at 2,200 hogsheads; leaving as the quantity taken for the West, 123,800 hogsheads. The quantity shipped to Atlantic ports is about 45,000 hogsheads, against 90,000 last year.

The first receipt of the new crop was two hogsheads on the 17th October; one week later than the first receipt of the previous year. The two hogsheads were of good grain, but of course were not well drained, and they were sold at six cents per pound. Subsequently, supplies came forward slowly, and it was not until the latter part of the month that the business assumed any considerable importance. The course of the market will be best indicated by the following table, which shows the highest and lowest point in each month for fair sugar on the levee:—

| | Highest. | Lowest. |
|---|---|---|
| October.....cents per lb. | 6 a 6¼ | 5¼ a 5⅜ |
| November..... | 5¼ a 5⅜ | 4⅞ a 5 |
| December ..... | 5 a 5¼ | 4⅞ a 5 |
| January ..... | 5¼ a 5¼ | 4⅞ a 5 |
| February..... ..... | 5 a 5⅜ | 4⅞ a 5⅛ |
| March..... | 4⅞ a 5¼ | 4⅞ a 5 |
| April..... | 5⅜ a 5⅜ | 4⅞ a 5¼ |
| May..... | 5⅜ a 5⅜ | 5⅜ a 5⅜ |
| June..... | 5⅜ a 6 | 5¼ a 5⅜ |
| July..... | 5⅜ a 6 | 5⅜ a 5⅜ |
| August..... ..... | 6¼ a 6¼ | 5⅜ a 6 |

It will thus be seen that the market has not been subjected to any violent fluctuations throughout the season, but on the contrary that it has generally been characterized by great steadiness, while the average of prices has been considerably above that of last year. The transactions on plantation have to a great extent been on private terms, though we obtained particulars of the sales of quite a number of crops, as they occurred, and we find by our records that the ruling rates in January and February were 4⅞ a 5⅛, in March 4⅞ a 5⅜, in April 5 a 5¼, in May 5¼ a 5⅜, and in June, when nearly all had passed out of planters' hands, 5 7-16 a 5⅜ cents per lb. The deficiency in the Louisiana crop

has led to increased imports of foreign sugars, and thus we have from Cuba 451 hhds. and 29,293 boxes, against 397 hhds. and 18,843 boxes last year. We have also an import from Brazil of 1,354 boxes of 1,800 pounds each, the first ever received at this port, but to be followed, we understand, by several other cargoes. Besides the Louisiana crop there were produced last year in Texas about 6,000 and in Florida about 1,500 hhds.

With respect to the growing crop, we have but a few remarks to offer, it being too early in the season to arrive at anything definite regarding its probable extent. It is understood that the severe frosts of November last cut short the supply of plant cane, and thus somewhat circumscribed the cultivation, while the cold spring, and the subsequent long drought, were unfavorable to the progress of the plant, particularly in the upper parishes. Within the past few weeks, however, frequent showers of rain have fallen, and the crops in most sections are said to present a marked improvement. The result, however, cannot be determined for many weeks to come, and we shall close these remarks by referring to the annexed table, which gives the product of each year since 1828.

| | | | |
|---|---|---|---|
| Crop of 1850.....hhds. | 211,203 | Crop of 1839.....hhds. | 115,000 |
| Crop of 1849..... | 247,923 | Crop of 1838..... | 70,000 |
| Crop of 1848..... | 220,000 | Crop of 1837..... | 65,000 |
| Crop of 1847..... | 240,000 | Crop of 1836..... | 70,000 |
| Crop of 1846..... | 140,000 | Crop of 1835..... | 30,000 |
| Crop of 1845..... | 186,650 | Crop of 1834..... | 100,000 |
| Crop of 1844..... | 200,000 | Crop of 1833..... | 75,000 |
| Crop of 1843..... | 100,000 | Crop of 1832..... | 70,000 |
| Crop of 1842..... | 140,000 | Crop of 1829..... | 48,000 |
| Crop of 1841..... | 90,000 | Crop of 1828..... | 88,000 |
| Crop of 1840..... | 87,000 | | |

From the best available data it would appear that (estimating the product of maple sugar at 50 millions pounds) the present consumption of the United States is about 550 millions of pounds—equal to 25 pounds for each individual of our population. Of this quantity Louisiana and Texas, with their present extent of cultivation and an average product, can furnish fully 300 millions pounds. Besides the sugar there were imported into the United States, in 1849-50, from foreign countries, 25 millions gallons molasses, and the product of Louisiana, for the same season, was 12 millions gallons.

Molasses. According to the statement of Mr. P. A. Champomier, the product of molasses from the last cane crop, estimating 50 gallons for every 1,000 pounds of sugar, was 10,500,000 gallons, or 1,500,000 gallons less than the product of the previous year. This deficient supply has been productive of a higher average of prices than has been attained for several years past, as will be seen by the following table, which exhibits the highest and lowest point in each month, for sales on the levee, in barrels:—

| | Highest. | Lowest. |
|---|---|---|
| October.....cents per gallon | 33 a 25 | 26½ a 27 |
| November..... | 27 a 28 | 24 a 24½ |
| December..... | 24½ a 24¾ | 23 a 24 |
| January..... | 20 a 24¼ | 18 a 23½ |
| February..... | 23 a 27½ | 18 a 24 |
| March..... | 25 a 30 | 23 a 27½ |
| April..... | 25 a 33 | 22 a 30½ |
| May..... | 26 a 35 | 25 a 32 |
| June..... | 25 a 32 | 25 a 30 |
| July..... | 22 a 30 | 20 a 28 |
| August..... | 22 a 32 | 22 a 30 |

About the middle of December the market opened with a good demand for crops on plantation, at 20 a 21 cents, and during the subsequent few weeks large sales were effected at this range, though mostly at 20½ cents per gallon. The highest sales of the season, according to our records, were in February and March, when some few crops were disposed of at 23 a 23½ cents per gallon. It

being found about this time that the Louisiana crop was nearly exhausted, orders for cargoes were sent to Cuba, and they began to arrive early in April. Up to this date the imports are equal to about 1,200,000 gallons, most of which has been taken for refining purposes. Of the crop of 10,500,000 gallons there have been shipped to Atlantic ports (estimating the exports from Attakapas at 12,000 barrels) about 2,000,000 gallons, against 4,500,000 gallons last year; leaving 8,500,000 gallons as the quantity taken for the consumption of the South and West. The receipts on the levee, from the interior, have been 184,483 barrels, against 189,813 barrels last year.

Tobacco. The tobacco trade, during the past season, has been marked by extraordinary vicissitudes, which have produced remarkable fluctuations in prices; and in tracing the course of our own market, we shall find it necessary to touch, from time to time, upon that of others, by the movements in which ours has been influenced in an unusual degree.

At the commencement of the year the stock in this port, as shown by our tables, was 14,842 hhds., of which amount we estimated that factors held 6,500 hhds., and our quotations then were, for Factory Lugs 5 a 5¼; Planters' Lugs 5¼ a 6¼; Leaf, common, 6¼ a 7¼; Fair to Fine 7¼ a 8¼; Choice 8¼ a 9 cents per lb. For several months prior to the close of the previous season, we had received from the West, as well as from Virginia and Maryland, very gloomy accounts regarding the crop, which had induced holders to withdraw a large portion of their stocks from the market, and the quantity actually on sale probably did not exceed 2,000 to 2,500 hhds. In the month of September the demand was fair, resulting in sales of about 2,000 hhds., and an advance of ¼ cent in prices. On the 8th October a number of telegraphic despatches were received, announcing frost in many parts of Kentucky and Tennessee, on the morning of the 5th of that month, and stating that very great injury had been done to the crops. These accounts at once produced a speculative feeling in the market, and prices commenced to tend upward. Further intelligence from the country having fully confirmed the frost news, and this being met by advices of an important improvement in the English markets, the excitement here during the ensuing thirty days was very great, and the advance in so limited a period almost unprecedented. The sales from the 8th October to the 12th November exceeded 6,000 hhds., (being swelled to this amount by a number of resales) and at the latter date our quotations were, for Lugs 7¼ a 8; Leaf, inferior to common, 9 a 9¼; Fair to Fine, 10 a 11; Choice and selections, 11¼ a 12¼ cents per lb. This important advance, although caused in a great measure, no doubt, by the accounts of the damage done by the frost, and the consequently reduced estimates made of the crop, (the figures of well-informed parties then ranging from 40,000 to 50,000 hhds.,) was attributable in at least as great a degree to the upward movement that had taken place in England, *prior to the receipt of the frost news in that country*, the sales in London and Liverpool, during September, having exceeded 4,500 hhds., at an advance of 1d. a 1½d. per lb. On the 6th of November the London quotations for Western Leaf, ranged from 3½d, to 9d., and for Western Strips, from 9d. to 15d. The bulk of the limited stock remaining on sale here in the latter part of November was in the hands of speculators, and a large portion of it having been purchased at high prices but a short time previous, it was not offered freely, even at the very full rates then quoted. The demand for some weeks following was by no means animated, but holders were enabled to realize tolerably steady prices for old crop, until the close of February, at which time the stock of old was reduced to a very low point. Of the new crop the first receipt was on the 14th December, an unusually late period, which tended to strengthen the impression that the extent of the yield would approximate to the lower estimates that had been made, and the smallness of the arrivals for some months served to confirm this belief. The proportion of *frosted* tobacco in the early receipts was large, and went to show that the farmers had been induced, by the high prices current here and elsewhere, to prepare and send to market an article that, at other times, they probably would have left in the fields. The extent to which this has contributed in producing

the great decline that has since taken place, it would be difficult to determine, but that it was very great no one can doubt. And we may here remark with regard to the quality of the past crop that although a small portion of it, from certain sections, has been equal, if not superior, to any that we have had here for some years past, the bulk of it has proved to be exceedingly deficient in size, substance and color.

Early in March it became known that the contract for the supply of the French Government had not been adjudicated, the Regie having rejected the lowest bids. During March the arrivals increased greatly, and before the end of that month we had become apprised that the manufacturers of England were making a determined stand, with every prospect of succeeding, against the holders of the very heavy stock then in the London and Liverpool markets, a large portion of which was known to be held on speculation by comparatively few parties. At this juncture the New York market began to droop, the stock here was rapidly accumulating, and the history of our market for the subsequent three months may be summed up in a few words: with a large and steadily increasing stock, and with generally but one, and never more than two large buyers operating, prices went down with almost as great rapidity as they had gone up the previous fall. Indeed, for many weeks it may be said, (and we so remarked at the time,) that we had *no market;* for the value of any description of tobacco could not be fixed with any degree of accuracy, and many sales were forced at constantly reduced figures. This state of things continued until about the middle of July, at which period the receipts amounted to 56,206 hhds., against 53,957 the previous year, and the stock on sale was estimated at about 16,000 hhds.; our quotations were for frosted 2 a 3; Planters' Lugs 3½ a 4½; Leaf, inferior to common, 5 a 5¾; Fair to Fine 6¼ a 7; Choice and Selections 7½ a 8½ cents per lb. These low prices brought buyers out more generally, and in the last twenty days of July the sales amounted to nearly 7,000 hhds., prices recovering during that period to the extent of ¼ a ¾ cent, and on some qualities 1 cent per pound. Since the beginning of August the demand has been moderate, but holders have shown no disposition to push off their stocks, and the sales of the month, which sum up about 4,000 hhds., have been at steady rates, the quotations being as follows—Frosted 2½ a 3½; Lugs, planters, 3¾ a 5; Leaf, inferior to common, 5½ a 6; fair to fine 6½ a 7; choice and selections 7½ a 9 cents per lb. We close our tables with receipts for the past twelve months of 64,030 hhds., and with a stock on hand, including all on shipboard not cleared, of 23,771 hhds., of which 10,000 hhds. are held by factors.

With respect to the growing crop, we have to remark that the advices have varied exceedingly from time to time. In the spring it was stated that the planting was unusually large. In June and July there were great complaints of drought, in nearly every section, and a large proportion of the planting was said to have been lost in consequence of the lack of rain. Within the last two or three weeks, however, we have received accounts of refreshing showers, by which it is stated the crop has been greatly improved; and although there is no longer a probability of so heavy a yield as was anticipated by many some months ago, on the other hand there would seem to be little likelihood of any serious deficiency in the supply.

The defects in the quality of the crop, to which we have already alluded, are attributable to the unfavorable seasons for planting, growing and curing, which the farmers have had to contend with; but we deem it proper to remark that probably no tobacco crop has ever been sent forward, upon the preparation of which for market so little care appeared to have been bestowed. We allude to this solely with a view of calling the attention of the farmers to the fact that if they wish to sustain the character of this market, it will be incumbent upon them to give at least a resonable share of care and attention to the handling, sorting and prizing of their crops.

Western Produce. This heading, as connected with our trade, embraces a great variety of commodities, of immense value, but our limited space will only admit of our noting the past season's operations in some few of the leading ar-

ticles. In the supplies of Flour and Indian Corn, there has been a material increase, as compared with last year, the receipts of the former since September 1st, being 941,106 barrels, against 591,986 barrels, and of the latter equal to 3,300,000 bushels, against 2,750,000 bushels. Of Wheat, also, there has been an increased supply, but little or none of it has been exported, and only a very small proportion sold here, the bulk having been on account of our city mills, or for transmission to Alabama and Georgia. The receipts are equal to 180,000 bushels against 110,00 bushels last year, Of Corn Meal the receipts are 3,662 barrels, against 5,187 barrels last year. The total exports of Flour since 1st September, amount to 583,418 barrels against 211,750 barrels last year. Of this quantity 205,508 barrels, were shipped to Great Britain, 145,340 to West Indies, &c., and the remainder to coastwise ports. Of Indian Corn the total exports have been equal to 1,300,000 bushels, against 1,060,000 bushels last year. Of this quantity 135,000 bushels were shipped to Great Britain and Ireland, 265,000 to West Indies, &c., and the remainder to coastwise ports. The following tables indicate the course of the market, by presenting the highest and lowest prices in each month, the range being according to quality.

PRICES OF FLOUR.

| | Highest. | Lowest. |
|---|---|---|
| September.....per barrel | $4 62½ a 5 25 | $4 12½ a 5 00 |
| October..... | 4 05 a 5 12½ | 4 25 a 5 12½ |
| November..... | 4 50 a 5 25 | 4 20 a 5 12½ |
| December..... | 4 47 a 5 12½ | 4 25 a 5 00 |
| January ..... | 4 35 a 5 12½ | 4 12½ a 5 00 |
| February..... | 4 20 a 5 00 | 3 90 a 4 75 |
| March..... | 4 00 a 5 00 | 3 65 a 4 75 |
| April..... | 4 15 a 5 00 | 3 90 a 4 75 |
| May..... | 4 10 a 4 90 | 3 70 a 4 75 |
| June ..... | 3 70 a 4 75 | 3 25 a 4 75 |
| July..... | 4 00 a 5 25 | 3 40 a 5 00 |
| August..... | 4 50 a 6 00 | 3 50 a 5 00 |

PRICES OF CORN IN SACKS.

| | Cents. | Cents. | | Cents. | Cents. |
|---|---|---|---|---|---|
| September..per bush. | .. a 68 | 50 a 60 | March.....per bush. | 57 a 60 | 50 a 58 |
| October..... | 60 a 75 | 50 a 60 | April..... | 50 a 58 | 46 a 55 |
| November..... | 85 a 90 | 68 a 75 | May ..... | 46 a 54 | 35 a 50 |
| December ..... | 65 a 70 | 50 a 58 | June..... | 35 a 57 | 34 a 55 |
| January..... | 65 a 70 | 60 a 68 | July..... | 34 a 60 | 34 a 58 |
| February..... | 60 a 68 | 54 a 67 | August..... | 34 a 62 | 30 a 47 |

The annexed table exhibits the exports of Breadstuffs from the United States to Great Britian and Ireland since 1st September, compared with the same period last year. By this it will be seen that there has been a very large increase in the exports of Flour and Wheat, while in those of Indian Corn there is shown a falling off of over fifty per cent. Nearly two-thirds of the whole has been shipped from the port of New York.

| | 1850–51. | 1849–50. |
|---|---|---|
| Flour.....barrels | 1,379,643 | 392,742 |
| Corn Meal ..... | 5,553 | 6,086 |
| Wheat.....bushels | 1,286,630 | 432,939 |
| Corn..... | 2,197,253 | 4,813,373 |

It is understood that the grain crops of the West are very fair, if not abundant; and this is fortunate for the South, where the corn crops have failed, even to a much greater extent than last year, when our planters were compelled to buy largely of the produce of the western farmers. At the same time, the fine promise of the European crops, if realized, is likely to prevent a very high range of prices, by lessening the demand for export. It was early asserted by westen dealers that the "hog crop" would be materially short of that of the previous year, and the correctness of this position would seem to be demonstrated by the very

large falling off in the receipts of Pork at this market, as shown by our tables. The supply of Beef, also, has been diminished, and the average of prices for both Pork and Beef has been much above that of last year. The following tables exhibit the highest and lowest points of each month.

PRICES OF PORK—PER BARREL.

| | PRIME. | | MESS. | |
|---|---|---|---|---|
| | Highest. | Lowest. | Highest. | Lowest. |
| September..... | $10 25 a 10 50 | $10 12½ a 10 25 | $8 50 a 9 90 | $8 50 a 9 00 |
| October..... | 11 12½ a 11 50 | 10 25 a 10 37½ | 9 00 a 9 25 | 8 25 a 8 75 |
| November..... | 11 20 a 22 00 | 11 25 a 11 62½ | 8 25 a 8 75 | 8 12½ a 8 40 |
| December..... | 12 00 a 12 50 | 11 50 a . . . . | 8 50 a 9 00 | 8 12½ a 8 40 |
| January..... | 12 00 a 12 50 | 11 75 a 12 00 | 10 00 a 11 00 | 9 00 a 9 50 |
| February..... | 13 50 a 14 25 | 12 50 a 13 00 | 12 00 a 13 00 | 10 50 a 11 00 |
| March..... | 12 75 a 13 50 | 12 50 a 13 00 | 10 00 a 11 50 | 10 50 a 11 00 |
| April..... | 14 00 a 14 75 | 13 25 a 13 75 | 11 75 a 12 25 | 10 75 a 11 25 |
| May..... | 14 75 a 15 00 | 14 25 a 14 75 | 12 50 a 13 00 | 12 00 a 12 50 |
| June..... | 14 50 a 14 75 | 14 00 a 14 50 | 12 00 a 12 50 | 12 00 a 12 50 |
| July..... | 14 00 a 14 37½ | 13 87½ a 14 37½ | 12 00 a 12 50 | 12 00 a 12 50 |
| August..... | 16 50 a 17 00 | 15 00 a 15 25 | 15 50 a 16 00 | 12 50 a 13 00 |

PRICES OF BEEF—PER BARREL.

| | MESS. | | PRIME. | |
|---|---|---|---|---|
| | Highest. | Lowest. | Highest. | Lowest. |
| September..... | $11 50 a 12 00 | $11 50 a 12 00 | $8 00 a 8 25 | $7 50 a 8 00 |
| October..... | 11 50 a 12 00 | 10 75 a 11 50 | 7 50 a 8 00 | 7 00 a 8 00 |
| November..... | 10 75 a 11 50 | 10 00 a 11 00 | 7 00 a 7 50 | 6 00 a 6 50 |
| December..... | 10 00 a 11 50 | 10 00 a 11 00 | 6 00 a 9 00 | 6 00 a 9 00 |
| January..... | 10 00 a 11 50 | 10 00 a 11 25 | 8 00 a 9 00 | 8 00 a 9 00 |
| Feburary ..... | 11 50 a 12 00 | 10 00 a 11 50 | 8 50 a 9 50 | 8 50 a 9 50 |
| March..... | 11 50 a 12 00 | 10 00 a 12 00 | 8 50 a 9 00 | 8 00 a 9 00 |
| April..... | 11 50 a 12 50 | 11 00 a 12 00 | 9 00 a 9 50 | 8 00 a 9 00 |
| May..... | 11 50 a 12 50 | 11 50 a 12 50 | 9 50 a 10 50 | 9 00 a 10 00 |
| June..... | 12 00 a 13 00 | 11 50 a 12 50 | 10 00 a 10 50 | 10 00 a 10 50 |
| July..... | 12 00 a 13 00 | 12 00 a 13 00 | 10 00 a 10 50 | 10 00 a 10 50 |
| August..... | 14 00 a 15 00 | 13 50 a 14 00 | 10 50 a 11 00 | 10 50 a 11 00 |

The decrease in the supply of Lard has been proportionate to that of Pork, and prices have been correspondingly enhanced. The total exports since 1st September, (all packages being reduced to kegs) are equal to 738,956 kegs, against 1,554,849 kegs last year. Of this quantity, 188,353 kegs were exported to foreign ports, against 696,259 kegs last year, Great Britian having taken 41,663 kegs against 425,830 kegs last year. The following table, showing the highest and lowest range of prices, according to quality, in each month, will exhibit the course of the market.

PRICES OF LARD.

| | Highest. | Lowest. |
|---|---|---|
| September .....cents per pound | 5¼ a 7½ | 5 a 7½ |
| October..... | 5 a 7½ | 5 a 7½ |
| November..... | 6½ a 7⅞ | 5 a 7½ |
| December..... | 6½ a 7½ | 6½ a 7⅞ |
| January..... | 7 a 9 | 6½ a 7½ |
| February..... | 7 a 9½ | 7 a 9 |
| March..... | 7 a 9 | 6½ a 8¼ |
| April..... | 8 a 11½ | 6½ a 8½ |
| May..... | 8 a 11½ | 8 a 11½ |
| June..... | 8 a 11½ | 8 a 10¼ |
| July..... | 8½ a 11 | 8½ a 10¼ |
| August..... | 8½ a 12 | 8½ a 11 |

LEAD. The marked change in the course of trade in this article, which has taken place within the past few years, has divested it of nearly all interest in this market, as, in the almost total absence of foreign demand, our port scarcely more than retains the distinction of a port for the transhipment to the Nothern

cities. The quantity received, too, has further materially fallen off, being only 325,505 pigs since 1st September, against 415,400 pigs during same period last year, and 785,000 pigs in 1845-6. This last amount was the largest ever received here during one year, and the foreign exports for the same period were 175,000 pigs, the greater part of which went to France. During the past season the total foreign exports are only 1,461 pigs to Genoa, and 179 to Yucatan, and the entire sales in this market barely reach 20,000 pigs, the extreme range of prices being $4,00 a $4 62½ per 100 lbs.; the highest in May and lowest in June. The total exports since 1st September, are 320,608 pigs against 410,146 pigs last year.

HEMP. We intimated in our last annual report there was likely to be a material falling off in the supply of Hemp, as compared with the year previous, and the result shows the receipts here, since 1st September, to be 25,116 bales, against 34,792 bales last year, or a decrease of 9,676 bales. Respecting the course of trade in the article, we may say, as in the case of Lead, that our city has almost ceased to be a market of sale, as there is no foreign demand, and the bulk of the supply is now sent here for transhipment to nothern ports. Thus the entire sales of the season have barely reached 1,000 bales at $90 00 a $103 00 per ton for dew rotted, and the total exports are 22,220 bales, of which 12 bales to Bremen is the only one to a foreign port. The following table exhibits the comparative receipts and average prices for a series of years.

| | Bales. | Per ton. | | Bales. | Per ton. |
|---|---|---|---|---|---|
| 1842-43..... | 14,873 | $80 | 1847-48..... | 21,584 | 115 |
| 1843-44..... | 38,062 | 66 | 1848-49..... | 19,856 | 132 |
| 1844-45..... | 46,274 | 60 | 1849-50..... | 34,792 | 109 |
| 1845-46..... | 30,980 | 60 | 1850-51..... | 25,116 | 100 |
| 1846-47..... | 60,238 | 90 | | | |

We have made some inquiries respecting the growing crop, and find that those best informed on the subject, expect that the supply will be even less than that of last year.

COFFEE. This prominent article among our foreign products, has met with extensive demand during the past season, and as importers have generally met the market pretty freely, and speculators have been more guarded in their operations, prices have not taken so wide a range, nor been subject to such sudden and extreme fluctuations, as was the case last year. Still, however, the difference between the highest and the lowest points is very material, amounting to 4½ cents per pound, the highest being 13 cents in the early part of October, before the arrival of any new crop, and the lowest 8½ cents, about the middle of June. Last year the highest rate was 14¾ cents, in February, and 7½ in May. The first cargo of the season arrived on the 17th October, and the opening price for any considerable parcel was 12 cents per pound. The following table show the imports, stocks &c.

| | | |
|---|---|---|
| Estimated stock out of grocers' hands on 1st Sept., 1850, of all kinds..bags | | 28,000 |
| Imports direct from Rio Janeiro..... | 279,190 | |
| Cuba, Laguayra, &c..... | 10,367 | |
| | | 289,557 |
| Received coastwise for sale..... | | 36,200 |
| Making a supply of..... | | 353,757 |
| Total supply last year..... | | 302,840 |
| Increase..... | | 50,917 |

In the direct imports from Rio, there is an increase, as compared with last year, of 54,177 bags, while in those of Cuba, &c., there is a decrease of 10,260 bags, and in the receipts coastwise for sale, a decrease of 15,000 bags. The present stock of all kinds, out of grocers hands, is estimated at 4,000 bags, which would leave 349,757 bags as the quantity taken for the consumption of the West and South, against 269,554 bags last year; or an increase of 80,203 bags. From the interesting circular of H. T. Lonsdale, Esq, Coffee Broker, we take the following table, which shows the monthly sales and average prices for Rio Coffee for

the year ending July 1st, 1851, which embraces the Coffee season. It will be seen that the average price of the entire year is 10 18-100 cents per pound.

| | Bags. | Price. |
|---|---|---|
| 1850—July | 11,833 | $9 36 |
| August | 13,867 | 9 20 |
| September | 26,559 | 10 40 |
| October | 3,370 | 12 15 |
| November | 35,094 | 10 54 |
| December | 59,159 | 10 15 |
| 1851—January | 67,120 | 10 78 |
| February | 39,246 | 10 79 |
| March | 42,193 | 10 22 |
| April | 39,405 | 9 87½ |
| May | 42,980 | 9 28 |
| June | 14,408 | 9 10 |
| Total | 395,035 | $10 18 |

The total export from Rio de Janeiro during the last crop year, ended on the 30th June, was 1,880,685 bags, of which 852,144 bags were shipped to the United States, against 573,059 bags the year previous. The stock on hand at Rio was estimated at 50,000 bags, chiefly of the low qualities. With respect to the *new crop*, circulars state that it was expected to arrive freely in August, and promised to be of good quality. Its extent is estimated at not *less* than 1,500,000 bags, besides which there are supposed to be 300,000 to 500,000 bags of last year's crop remaining over. This would give a supply for the crop year to end on the 30th June next of 1,800,000 to 2,000,000 bags. The particulars of the past year's export to the United States are as follows: to New Orleans and Mobile, 276,658, bags, Baltimore 256,032, New York 243,215, Philadelphia 33,688, Boston 11,218, Charleston and Savanah 7,015, California 3,318; total 852,144 bags.

EXCHANGE. The range for Sterling has not varied greatly from that of last year. The extreme rates are 6½ a 7¼ per cent premium in January, and 10 a 11 in August. Francs, 5f. 30 a 5f. 35 per dollar in January, and 5f. 05 a 5f. 12½ in May. New York and Boston, sixty day's sight, 3 a 3½ per cent discount in January and 1⅝ a 1¾ in July. Sight checks 2 a 2½ per cent discount in January, and 1 per cent premium in August.

FREIGHTS. We have no space for extended remarks under this head, and must content ourselves with stating that, while the fluctuations from time to time have been very material, the general average of rates has been considerably above that of last year. As the rate for cotton to Liverpool is the leading guide, we give the extremes of the year, the highest being ⅝ a 13-16d. in February, and the lowest 5-16 a ⅜d. in October, April, June and July. The total number of arrivals from sea since September 1st, is 2,144, viz:—615 ships, 190 steamships, 320 barks, 315 brigs, and 704 schooners; and the entries at the Custom-House during the year ended 30th June last wers as follows:—whole number of vessels 2,054; tonnage 768,027. Of these 333 vessels, measuring 136,998 tons, were foreign, from foreign ports. Last year the whole number of entries was 2,141, and the tonnage 763,634. The proportion of foreign was 378 vessels, and 176,344 tons.

STOCK OF PORK.

| | 1851. | 1850. | 1849. |
|---|---|---|---|
| Clear.....barrels | 144 | 73 | 151 |
| Prime Mess | ..... | 241 | 27 |
| Mess | 11,338 | 16,821 | 18,816 |
| Mess Ordinary | 1,773 | 1,640 | 4,500 |
| Soft Mess | 57 | ..... | 90 |
| Prime | 135 | 4,163 | 3,424 |
| Rumps | 164 | 671 | 2,647 |
| Soft Prime | ..... | 104 | 502 |
| Inferior, damaged, &c | 288 | 845 | 567 |
| Not inspected | 2,983 | 284 | 1,880 |
| Total | 16,892 | 24,924 | 32,680 |

## Art. III.—THE GROWTH OF TOWNS IN THE UNITED STATES.

In vol. viii., page 321, of the *Merchants' Magazine*, we undertook to demonstrate that, within one hundred years, the largest city of our country would be in the great valley embraced by the basins of the St. Lawrence and the Mississippi.

In the same volume, page 447, facts were adduced to show the tendency of the trade of the great valley to the lake borders, indicating the concentration, within one hundred years, of the greatest Commerce and population in one or more of the lake cities.

In vol. ix., page 31, facts were submitted to prove the tendency of modern improvements and civilization to congregate men in towns and cities, and the effect of that tendency to building up great towns and cities in the Western Valley, and especially on the lake borders.

In vol. xiv., page 163, is an article, on "The Progress of the West considered with reference to the great Commercial Cities of the United States;" and, in vol. xix., page 383, "Our Cities, Atlantic, and Interior," are compared in reference to their past and future growth.

The census of 1850 having given us new facts, we now propose to deduce a law of growth of our leading cities and towns.

Of the cities and towns, of note in 1790, New York has had the most rapid growth, having had an average duplication of a little less than 15 years. With its suburbs, properly depending on it, as a commercial mart, such as Brooklyn, Williamsburg, &c., its population, in 1850, is set down at 650,000. The census of 1790 made it 33,131. During the same sixty years, Albany grew from a village of 3,498 to a city of 51,000—doubling its numbers on an average of 16 years.

Baltimore comes next, having grown from 13,508, in 1790, to 170,000, in 1850, making its average time of duplication about 17 years.

Philadelphia has doubled once every 18 years, having, with its suburbs, grown from 46,000, in 1790, to 450,000, in 1850.

Boston, and its business suburbs, is estimated, in round numbers, to have had 30,000, in 1790, which increased to 212,000, in 1850, making its average period of duplication about 21 years.

Worcester had about the same proportionate growth as Boston, having gone up from 2,095 to 15,864.

Charleston, South Carolina, had 16,359, in 1790, and 43,000, in 1850—thus requiring about 45 years to double its numbers.

Salem increased from 8,000 to 19,000, thus doubling only once in 50 years.

The above cities and towns increased from 153,591, in 1790, to 1,611,000, in 1850, making, in the aggregate, an average duplication in a little over 18 years. If all the towns of note, in 1790, were embraced, it would show a slower growth, and, probably, raise the average period of duplication to 20 years.

Calculating the growth of the principle places, from 1800 to 1850, we find some changes in the relative rapidity of increase.

| | Years. | Population in 1800. | Population in 1850. |
|---|---|---|---|
| New York, with suburbs, had an average duplication of less than 15 years, say.... | 14½ | 63,000 | 650,000 |
| Albany doubled once in..... | 15 | 5,349 | 51,000 |
| New Orleans..... | 12 | 8,000 | 125,000 |
| Washington..... | 13 | 3,210 | 40,000 |
| Baltimore..... | 21 | 26,614 | 170,000 |
| Philadelphia, and suburbs..... | 20 | 73,000 | 450,000 |
| Boston, and suburbs..... | 23 | 38,000 | 212,000 |
| Providence..... | 23 | 7,614 | 41,500 |
| Richmond..... | 24 | 5,537 | 27,500 |
| Worcester..... | 18 | 2,411 | 16,000 |
| Lancaster..... | 40 | 4,292 | 12,500 |
| Charleston..... | 45 | 18,712 | 43,000 |
| Salem..... | 50 | 9,457 | 19,000 |
| Alexandria..... | 50 | 4,196 | 8,800 |
| Cincinnati..... | 6½ | 750 | *125,000 |
| Pittsburg..... | 9 | 1,565 | 83,000 |
| St. Louis..... | 9½ | 2,000 | 80,000 |
| The above cities, together..... | 17 | 273,391 | 2,154,300 |
| All but the four Western..... | 20 | 261,076 | 1,741,300 |
| The four Western..... | 8 | 12,313 | 413,000 |
| The four largest Eastern..... | 15½ | 201,000 | 1,482,000 |

The above table gives a fair view of the growth of our cities and chief towns for the last half century. It exhibits the growth of the western towns, which had just come into the census table in 1800, in a striking light. The law of increase, in the old cities, for the 50 years, varies but little from that of sixty years, as previously given.

Let us see how it will stand for the 40 years, from 1810 to 1850. The following are all the cities and towns of which we have been able to obtain the proportions for the two periods. The average period of duplication will be given with an approximation to accuracy sufficient for the comparison. They take precedence in the table according to rapidity of growth:—

PERIOD OF DUPLICATION.

| | Years. | | Years. | | Years. |
|---|---|---|---|---|---|
| Cincinati..... | 7 | Washington..... | 16½ | Harrisburg..... | 22 |
| Louisville..... | 8 | Worcester..... | 17 | Richmond..... | 29 |
| Buffalo..... | 8½ | Wilmington, Del... | 17½ | Schenectady..... | 30 |
| Detroit..... | 8½ | Newark, N. J ..... | 17½ | York, Pa..... | 32 |
| St. Louis..... | 9 | Philadelphia..... | 18½ | Lancaster, Pa..... | 35 |
| Pittsburg..... | 9½ | Boston ..... | 18½ | Carlisle..... | 45 |
| Bangor..... | 10 | Reading, Pa..... | 19 | Charleston, S. C.... | 50 |
| Wheeling..... | 10½ | Hartford, Ct..... | 19½ | Norfolk, Va..... | 50 |
| Utica... ..... | 12 | Providence ..... | 19½ | Salem, Mass..... | 85 |
| Troy..... | 14 | Baltimore ..... | 21 | Portsmouth, N. H.. | 106 |
| New Oorleans..... | 14½ | Savannah..... | 21 | Newport, R. I..... | 150 |
| New York..... | 15 | Portland ..... | 21 | Newburyport..... | 160 |
| Albany..... | 16 | New Haven..... | 21 | Alexandria, Va.... | 200 |

The increase of all these places, during the 40 years, exceeded two millions, on a population of less than half a million. In other words, they more than quintupled their numbers in 40 years; doubling on an average period of from 18 to 19 years. The western towns (including New Orleans and Utica) increased from 31,259 to 426,359, being about equal to an average duplication of 12½ years.

* With suburbs.

During the 30 years, from 1820 to 1850, the law of increase, as indicated by the preceding table, is materially varied, only in few unimportant instances. A somewhat more rapid growth is manifest, as we approach the present time. The following table gives the average period of duplication, for the last 30 years, in the order of most rapid growth:—

AVERAGE TIME OF DUPLICATION.

| | Years. | | Years. | | Years. |
|---|---|---|---|---|---|
| Lowell | 4 | Jamesville | 13 | Richmond | 24 |
| Buffalo | 6½ | Springfield, Mass | 13 | Baltimore | 25 |
| St. Louis | 7 | New Orleans | 15 | Savannah | 25 |
| Rochester | 7 | Boston | 15 | Portland | 25 |
| Cincinnati | 7½ | Albany | 15½ | Wilmington, Del | 25 |
| Louisville | 8 | Philadelphia | 16 | Lancaster, Pa | 25 |
| Detroit | 8 | Hartford, Ct | 16 | Newburg | 26 |
| Columbus, O | 8½ | Nashville | 17 | Taunton | 26 |
| Pittsburg | 8½ | Reading | 17 | Hudson, N. Y | 27 |
| Bangor | 9 | Chilacothe | 17 | York, Pa | 30 |
| Erie | 9 | Providence | 18 | Charleston, S. C | 40 |
| Wheeling | 9½ | Agusta, Me | 18 | Carlisle | 40 |
| Mobile | 10 | Schenectady | 19 | Norfolk | 42 |
| Newark | 12 | New Haven | 19 | Salem, Mass | 60 |
| Worcester | 12 | New London | 25 | Newport | 70 |
| New York | 13 | Washington | 20 | Newburyport | 80 |
| Troy | 13 | Harrisburg | 20 | Portsmouth | 85 |
| Utica | 13 | Bath, Me | 20 | | |

The order of growth, and the average period of duplication, for the 20 years, from 1830 to 1850, is shown, with an approach to accuracy, in the following table:—

AVERAGE TIME OF DUPLICATION.

| | Years. | | Years. | | Years. |
|---|---|---|---|---|---|
| Cleveland | 5 | Syracuse | 13 | Boston | 20 |
| Columbus | 5 | Lockport | 14 | Albany | 20 |
| St. Louis | 5½ | Springfield, Mass | 14 | Wilmington, Del | 20 |
| Sandusky City | 6 | Fall River | 14 | Schenectady | 20 |
| Detroit | 6 | Nashville | 14 | Richmond | 21 |
| Indianapolis | 7½ | Lynn | 14½ | Reading, Pa | 21½ |
| Mobile | 7½ | New York | 15 | Lancaster | 24 |
| Lowell | 8 | Troy | 15½ | Savannah | 24 |
| Cincinnati | 8½ | Chilacothe | 16 | Harrisburg | 24 |
| Marietta | 8½ | Wheeling | 16 | Natchez | 25 |
| Dayton | 8½ | Philadelphia | 17 | Taunton | 26 |
| Bangor | 8½ | Providence | 17½ | Poughkeepsie | 28 |
| Buffalo | 8½ | Hartford | 17½ | York, Pa | 29 |
| Erie | 9 | Washington | 18 | Salem, Mass | 37 |
| Louisville | 9½ | New Orleans | 18 | Newburyport | 40 |
| Pittsburg | 10 | New Haven | 18½ | Carlisle | 40 |
| New Albany | 10 | New London | 18½ | Charleston, S. C | 50 |
| Madison | 10 | Portland | 18½ | Norfolk | 50 |
| Rochester | 10½ | Baltimore | 19 | Portsmouth, N. H | 90 |
| Worcester | 11 | New Bedford | 19 | Hudson, N. Y | 100 |
| Newark, N. J | 12 | Bath, Me | 19 | Newburg, N. Y | 100 |
| Zanesville | 12 | Utica | 19 | Newport, R. I | 100 |

The following table exhibits the average period of duplication on the increase of the 10 years, from 1840 to 1850.

AVERAGE TIME OF DUPLICATION.

| | Years. | | Years. | | Years. |
|---|---|---|---|---|---|
| Milwauke | 3 | Springfield | 10 | Troy | 14½ |
| Chicago | 3½ | Fall River | 10 | Wilmington Del. | 15 |
| St. Louis | 4 | Hartford | 11½ | Lancaster, Pa. | 15½ |
| Manchester, N. H. | 4 | Reading | 11½ | Patterson | 16 |
| Sandusky City | 5½ | New York | 12 | Bath, Me | 16 |
| Columbus, O. | 6 | Boston | 12 | Albany | 16½ |
| Cleveland | 6 | Washington | 12 | York, Pa. | 20 |
| Toledo | 6 | Rochester | 12 | Utica | 24 |
| Cincinnati | 6 | Chilacothe | 12 | New Bedford | 26 |
| Marietta | 7 | Philadelphia | 12½ | Lockport | 27 |
| Indianapolis | 7½ | Savannah | 12½ | Schenectady | 28 |
| Pittsburg | 8 | Portland | 12½ | Newburyport | 28 |
| Newark, N. J. | 8 | Providence | 12½ | Norfolk | 30 |
| Oswego | 8 | Lynn | 12½ | Petersburg, Va. | 32 |
| Dayton | 8 | New Haven | 13 | New Orleans | 34 |
| New Albany | 8 | Columbia, S. C. | 13 | Charleston, S. C. | 35 |
| Buffalo | 8½ | Baltimore | 13½ | Portsmouth | 40 |
| Nashville | 8½ | Wheeling | 13½ | Salem | 42 |
| Detroit | 9 | Lowell | 14 | Newport, R. I. | 65 |
| Zanesville | 9 | Mobile | 14 | Natchez | 85 |
| Louisville | 9½ | New London | 14 | Poughkeepsie | 90 |
| Worcester | 9½ | Bangor | 14 | Hudson | 100 |
| Madison | 9½ | Richmond | 14½ | Carlisle | 180 |
| Syracuse | 10 | | | | |

Having laid before our readers the facts in relation to the growth of the principal centers of population of the United States, they may now proceed with us to deduce a law of growth from their average time of duplication; for a period of sixty years, as to those existing previous to 1790, bringing in the new places as they come forth from the wilderness, and take a place on the census list, in successive decennial enumerations. The figures represent, with an approach to accuracy, the number of years each place has required, on the average, to double the number of its people.

AVERAGE FOR

| | 60 Years. | 50 Years. | 40 Years. | 30 Years. | 20 Years. | 10 Years. |
|---|---|---|---|---|---|---|
| New York | 15 | 14½ | 15 | 13 | 15 | 12 |
| Philadelphia | 18 | 20 | 18½ | 16 | 17 | 12½ |
| Baltimore | 17 | 21 | 21 | 25 | 19 | 13½ |
| Boston | 21 | 23 | 18½ | 15 | 20 | 12 |
| Albany | 16 | 15 | 16 | 15½ | 20 | 16½ |
| Salem, Mass. | 50 | 50 | 85 | 60 | 37 | 42 |
| Worcester | 21 | 18 | 17 | 12 | 11 | 9½ |
| Charleston, S. C. | 45 | 45 | 50 | 40 | 50 | 35 |
| Providence | .. | 23 | 19½ | 18 | 17½ | 12½ |
| Washington | .. | 13 | 16½ | 20 | 18 | 12 |
| Richmond, Va. | .. | 24 | 29 | 24 | 21 | 14½ |
| Lancaster, Pa. | .. | 40 | 35 | 25 | 24 | 15½ |
| Alexandria, Va. | .. | 50 | 200 | 450 | 440 | 400 |
| Cincinnati | .. | 6½ | 7 | 7½ | 8½ | 6 |
| Pittsburg | .. | 9 | 9½ | 8 | 10 | 8 |
| St. Louis | .. | 9½ | 9 | 7 | 5½ | 4 |
| New Orleans | .. | .. | 14½ | 15 | 18 | 34 |
| Louisville | .. | .. | 8 | 8 | 9½ | 9½ |
| Buffalo | .. | .. | 8½ | 6½ | 8½ | 8½ |
| Detroit | .. | .. | 8½ | 8 | 6 | 9 |
| Bangor | .. | .. | 10 | 9 | 8½ | 14 |
| Wheeling | .. | .. | 10½ | 9½ | 16 | 13½ |

| | 60 Years. | 50 Years. | 40 Years. | 30 Years. | 20 Years. | 10 Years. |
|---|---|---|---|---|---|---|
| Utica | .. | .. | 12 | 13 | 19 | 24 |
| Wilmington, Del. | .. | .. | 17½ | 25 | 20 | 15 |
| Newark | .. | .. | 17½ | 12 | 12 | 8 |
| Reading | .. | .. | 19 | 17 | 21½ | 11½ |
| Hartford, Ct. | .. | .. | 19½ | 16 | 17½ | 11½ |
| Providence | .. | .. | 19½ | 18 | 17½ | 12½ |
| Savannah | .. | .. | 21 | 25 | 24 | 12½ |
| Portland, Me. | .. | .. | 21 | 25 | 18½ | 12½ |
| New Haven | .. | .. | 21 | 19 | 18½ | 13 |
| Harrisburg | .. | .. | 22 | 20 | 22 | 27 |
| Schenectady | .. | .. | 30 | 19 | 20 | 28 |
| York, Pa. | .. | .. | 32 | 30 | 29 | 20 |
| Lancaster, Pa. | .. | .. | 35 | 25 | 24 | 15½ |
| Carlisle | .. | .. | 45 | 40 | 40 | 180 |
| Norfolk, Va. | .. | .. | 50 | 42 | 50 | 30 |
| Portsmouth | .. | .. | 106 | 85 | 90 | 40 |
| Newport, R. I. | .. | .. | 150 | 70 | 100 | 65 |
| Newburyport | .. | .. | 160 | 80 | 40 | 28 |
| Lowell | .. | .. | .. | 4 | 8 | 14 |
| Rochester | .. | .. | .. | 7 | 10 | 12 |
| Columbus, O. | .. | .. | .. | 8½ | 5 | 6 |
| Bangor | .. | .. | .. | 9 | 8½ | 14 |
| Erie, Pa. | .. | .. | .. | 9 | 9 | 12 |
| Mobile | .. | .. | .. | 10 | 7½ | 14 |
| Zanesville | .. | .. | .. | 13 | 12 | 9 |
| Springfield, Mass. | .. | .. | .. | 13 | 14 | 10 |
| Nashville | .. | .. | .. | 17 | 14 | 8½ |
| Chilacothe | .. | .. | .. | 17 | 16 | 12 |
| Augusta, Me. | .. | .. | .. | 18 | 18 | 15 |
| Schenectady | .. | .. | .. | 19 | 20 | 28 |
| Hudson | .. | .. | .. | 27 | 100 | 100 |
| New London | .. | .. | .. | 25 | 18½ | 14 |
| Bath, Me. | .. | .. | .. | 20 | 19 | 16 |
| Newburg, N. Y. | .. | .. | .. | 26 | 100 | decrease. |
| Taunton, Mass. | .. | .. | .. | 26 | 26 | 16 |
| Syracuse | .. | .. | .. | .. | 13 | 10 |
| Poughkeepsie | .. | .. | .. | .. | 28 | 90 |
| Lockport | .. | .. | .. | .. | 14 | 27 |
| Lynn | .. | .. | .. | .. | 14½ | 12½ |
| New Bedford | .. | .. | .. | .. | 19 | 26 |
| Fall River | .. | .. | .. | .. | 14 | 10 |
| New Albany, Ia. | .. | .. | .. | .. | 10 | 8 |
| Natchez | .. | .. | .. | .. | 25 | 85 |
| Madison | .. | .. | .. | .. | 10 | 9½ |
| Indianapolis | .. | .. | .. | .. | 7½ | 7½ |
| Cleveland | .. | .. | .. | .. | 5 | 6 |
| Columbus | .. | .. | .. | .. | 5 | 6 |
| Marietta | .. | .. | .. | .. | 8½ | 7 |
| Sandusky City | .. | .. | .. | .. | 5 | 5½ |
| Dayton | .. | .. | .. | .. | 5 | 8 |
| Chicago | .. | .. | .. | .. | .. | 4 |
| Manchester, N. H. | .. | .. | .. | .. | .. | 4 |
| Milwauke | .. | .. | .. | .. | .. | 3 |
| Toledo | .. | .. | .. | .. | .. | 6 |

NOTE. Lawrence, Mass.; Racine, Wis.; Kenosha, Wis., and several other places of importance, came into existence within ten years.

It will be observed that the growth of our towns, during the last ten years, has, in general, been decidedly greater than that of any ten preceding years. This goes to prove the great influence of railroads, canals, and other facilities to commercial movement.

In respect to all those places which are favorably located for the concentration of internal Commerce, the law of growth may be fairly deduced from the foregoing tables. Their progres, it will be seen, has, in the main, been in proportion to the command of this internal Commerce. Salem, Newport, and some others, which have exhibited the slowest growth, have but a slight hold on the surrounding soil. On the other hand, Cincinnati, St. Louis, New York, and Boston are in the midst of a rich country, and have extensive and easy channels of intercourse with the interior.

The cities of the Atlantic border, below the Chesapeake, and of the Gulf of Mexico to New Orleans, have the disadvantage of being far removed from the country which yields their chief commercial aliment. The pine barriers extend from the coast some 50 to 150 miles. This has to be passed, in connecting Charleston, Savannah, &c., with the country, on whose internal resources they depend.

The institution of slavery has, also, an unfavorable influence in the growth of towns situated in States where slaves are most numerous. Whether this is inherent, or owing to the profits of planting being greater than manufacturing, it is not for us to decide.

It has been said, that speculations on the future probable growth of our towns has no practical value. Can this be so? Is it of no practical value to the man of business, seeking a place for the exercise of his talents, to have the means provided of judging of the relative advantages for Commerce, and its future expansion, of the places between which he has to chose his future home? Is it of no moment to the mechanic seeking a permanent location of his factory or shop? Tens of thousands are every day invested in real estate, whose only value depends on the growth of the places in which and near which it is situated. Many of these investments are made with a view to their value many years in the future. Ought they to be made with or without knowledge of all the circumstances that may be reasonably expected to bear on their future value? In this country, growth in numbers generally represents increase of capital and business. It may, therefore, answer as a tolerable basis for a calculation of the relative value of real estate.

In 1860, New York, with its suburbs, may be expected to contain half a million more than her present numbers. Where will these be located, and what will be the value of the lots to be covered with buildings for their accommodation? These inquiries will be resolved in the mind of any man about to invest in real estate there, and expecting to turn the investment into money in nine or ten years. But perhaps he will first desire to ascertain whether New York or some other commercial point offers the best prospect of a good profit on his investment. Our last table gives a scale of growth. In the cases embracing forty, fifty, and sixty years, the past may be considered a safe guide for the future. A nearly uniform high rate of increase, through so many decades, may be relied on with much confidence, in calculations for the future.

In relation to places of recent origin, although their law of growth may not be deduced from an experience of the past of sufficient duration to warrant a decision from that alone, yet there may be causes in operation, sufficiently obvious, to force a conviction of a future increase, corresponding to the past. Such seems to be the case of Chicago and other western cities. In less than twenty years that place has grown from a mere station to contain thirty thousand. Troy, N. Y., contains about the same number. Who would say,

that the prospective value of real estate surrounding each should be estimated equal?

New Orleans and Cincinnati are now nearly equal in population. In ten years the former will scarce gain forty thousand, while the latter will increase not less than one hundred and fifty thousand. Who would give the same for vacant lots on the borders of the former as on those of the latter—other things being equal?

On account of the permanency of the record afforded by the *Merchants' Magazine*, the opinion is here repeated, that within one century, the largest cities of America will be in the interior, and that Cincinnati, Chicago, St. Louis, and Toledo will be the four largest. J. W. S.

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## Art. IV.—INTERNAL IMPROVEMENTS IN THE STATE OF NEW YORK.

### A SKETCH OF THE RISE, PROGRESS, AND PRESENT CONDITION OF INTERNAL IMPROVEMENTS IN THE STATE OF NEW YORK.

NUMBER XI.

### RAILROADS, &c.

The railroad line from the Hudson River, at Albany, to Buffalo, on Lake Erie, was constructed under seven distinct corporations. The portion from Albany to Schenectady, 16 miles, was completed in 1831; the road from Schenectady to Utica, 78 miles, was finished in 1836, and the conveyance by railroad was not carried beyond Utica, for three years; and in the meantime a railroad from Rochester to Batavia, 33 miles, was put in operation in 1837; and extended 12 miles to Attica in 1842. The road from Utica to Syracuse, 53 miles, was not put in operation until July, 1839. The road from Syracuse to Auburn, 25 7/8 miles was not in full operation until 1839, although 22 miles were operated with horse power from January, 1838, the cars running upon wooden ribbons laid on the wooden rails. The Auburn and Rochester Road, 78½ miles, was completed in November, 1841. The Attica and Buffalo, 31 miles, was commenced September, 1841, and finished December, 1842. The Troy and Schenectady Road was also finished in 1842.* At the commencement of 1843, therefore, a connected line of railroad was in operation from Albany and Troy, to Buffalo, at an aggregate expense at that time of about seven and a half millions of dollars, a little more than the original cost of the Erie Canal. The aggregate cost of these eight roads, as given in the annual reports of 1850, exceeds fifteen millions and a quarter of dollars.

The following table shows the length in miles, cost of construction, debt, and earnings and expenses in 1850, of each railroad in the State of New York:—

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* The railroad from Albany to Boston, was opened in December, 1841. This being done, the enterprising spirit of Boston, furnished the necessary means to complete and put in operation the Attica and Buffalo Road, which had been chartered in 1836, and extended in 1838.

| Name. | Miles. | Cost of road. | Debt. | Earnings. | Expenses. |
|---|---|---|---|---|---|
| Albany and Schenectady..... | 17 | $1,711,412 | $700,000 | $208,584 | $91,171 |
| Albany and West Stockbridge*... | 38½ | 1,930,895 | 930,895 | 335,730 | 186,770 |
| Attica and Buffalo..... | 31½ | 906,915 | 42,676 | 229,710 | 70,909 |
| Auburn and Rochester† ..... | ... | ..... | ..... | 515,810 | 163,465 |
| Buffalo and Niagara Falls ..... | 22 | 428,241 | 34,165 | 73,296 | 17,218 |
| Cayuga and Susquehanna..... | 35 | 580,310 | 434,849 | 48,225 | 30,810 |
| Chemung‡ ..... | 17¾ | 450,000 | 75,000 | 25,500 | ..... |
| Corning and Canandaigua..... | 45 | ..... | ..... | ..... | ..... |
| Hudson and Berkshire ..... | 31½ | 821,331 | 372,149 | 41,040 | 27,349 |
| Hudson River‖..... | 144 | 6,666,681 | 3,697,901 | 267,660 | 167,383 |
| Long Island§ ..... | 98 | 2,461,341 | 537,000 | 173,600 | 129,694 |
| New York and Erie¶..... | 464½ | 20,323,581 | 12,332,433 | 1,063,950 | 518,412 |
| New York and Harlem..... | 80 | 4,666,208 | 578,278 | 482,567 | 246,719 |
| New York and New Haven**.... | 13½ | 737,839 | 203,242 | 102,195 | 50,687 |
| Northern††..... | 118 | 2,979,937 | 1,627,882 | 18,158 | 12,317 |
| Oswego and Syracuse..... | 35 | 571,774 | 210,463 | 78,371 | 38,942 |
| Rensselaer and Saratoga ..... | 25½ | 687,324 | 189,879 | 112,726 | 47,688 |
| Rochester and Syracuse..... | 104 | 4,200,000 | 916,000 | 201,436 | 60,876 |
| Saratoga and Schenectady..... | 22 | 396,379 | 64,550 | 28,935 | 15,794 |
| Saratoga and Washington ..... | 39½ | 1,102,505 | 369,500 | 89,449 | 44,476 |
| Schenectady and Troy ..... | 20½ | 680,046 | 61,398 | 42,345 | 60,267 |
| Syracuse and Utica..... | 53 | 2,490,083 | 48,000 | 472,775 | 202,728 |
| Tonawanda..... | 43½ | 1,216,820 | 166,848 | 344,398 | 109,622 |
| Troy and Greenbush..... | 6 | 282,527 | 8,650 | 59,418 | 43,054 |
| Utica and Schenectady..... | 78 | 4,143,918 | 102,500 | 923,425 | 308,173 |
| Watertown and Rome‡‡. ..... | 75 | 603,457 | 200,000 | 2,132 | 262 |
| Total..... | 1,657¾ | 61,039,524 | 23,904,258 | 5,941,435 | 2,645,186 |

The following statement shows the cost of the several canals, in the State, and the earnings and expenditures of each, for the fiscal year ending 30th September, 1850 :—

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* The Albany and West Stockbridge is rented by the Massachusetts "Western" Railroad. The two last columns of the table are filled by apportioning the earnings and expenses on the number of miles in the whole line. The rent of the road is believed to be 6 per cent on its cost.

† The "Rochester and Syracuse" in the table, is a consolidation of the "Auburn and Rochester," 78 miles, and the "Auburn and Syracuse," 26 miles. The earnings and expenses in the line of "Auburn and Rochester" are for ten months; that of the "Rochester and Syracuse," for two months.

‡ The Chemung Railroad is rented by the New York and Erie, at $25,500 per annum.

‖ The Hudson River Road reports on 75 miles in operation for nine months only. The whole road, 144 miles, is now (October 1, 1851,) in operation. This will add materially to the cost of the road and the debt.

§ The Long Island Road, being in the hands of a receiver in 1850, made no report. The cost of the road from Jamaica to Greenport is taken from former reports at $2,091,341. The Brooklyn and Jamaica, 11 miles in length, which is rented by the Long Island Road, cost about $370,000. The total of both is given in the table. The earnings and expenses for 11 months are for the two roads, while in charge of the receiver. The roads are now going on under the management of the same person as President of the Long Island Railroad Company.

¶ The report of the New York and Erie is only for nine months. The road is now in operation to Lake Erie. On the direct line from Dunkirk to Piermont, on the Hudson, 25 miles from the city of New York, the distance, as stated by the President of the company, is 445¼ miles. The branch from Chester to Newburg is 19 miles, making a total of 464¼ miles, as stated in the table. The earnings and expenses of the road are only for nine months. The gross earnings since the road was opened to the Lake, average more than a quarter of a million per month, which for a year would exceed three millions. As the items of cost and debt are made up to the 30th of September last, a considerable increase must have taken place since the report was made.

** The New York and New Haven Road is 61 miles in length, cost $3,417,737, has a debt of $918,487, and its earnings for 1850 were $461,789, and its expenses $237,886, as shown by the annual report. It has only 13½ miles within the limits of New York, and the items in the table are apportioned accordingly.

†† The Northern Road, from Ogdensburg to Lake Champlain, reports 44 miles in operation on the 30th of September, but had 118 miles in operation in October, and the table is filled with the latter number. The earnings were on 44 miles from the 1st of June to the 1st of October.

‡‡ This road was put in operation from Rome to Watertown, 75 miles, in September, 1851. The earnings and expenses in the report are on 24 miles for a few weeks in 1850.

| | Cost. | Tolls. | Annual expenses. |
|---|---|---|---|
| Erie Canal, original cost | $7,143,789 | $2,926,316 | $439,796 |
| Erie Canal Enlargement | 15,990,443 | ..... | .. ... |
| Champlain Canal | 1,257,604 | 128,761 | 61,100 |
| Oswego Canal | 565,437 | 94,524 | 33,229 |
| Cayuga and Seneca Canal | 237,000 | 27,589 | 11,956 |
| Chemung Canal | 648,600 | 16,276 | 30,782 |
| Chenango Canal | 2,420,000 | 20,343 | 26,308 |
| Black River Canal | 2,057,388 | 1,115 | 10,014 |
| Genesee Valley Canal | 4,477,969 | 28,821 | 18,737 |
| Oneida Lake Canal | 50,000 | 2,513 | 5,264 |
| Oneida River Improvements | 84,083 | 5,555 | 394 |
| Seneca River Towing Path | 14,864 | 230 | .... |
| Cayuga Inlet | 11,279 | 205 | .... |
| Delaware and Huson Canal | 3,871,620 | ..... | .... |
| Total canals, 862 miles | $38,986,857 | $3,254,051 | $637,580 |

SUMMARY OF THE TWO TABLES.

| | | | |
|---|---|---|---|
| Total length of canal navigation within the limits of the State of New York | 862 | | |
| Total length of railroads within the limits of the State of New York | 1,657½ | | |
| | | | 2,519½ |
| Total cost of canals | $38,986,857 | | |
| Total cost of railroads | 61,039,524 | | |
| | | | $100,026,381 |
| Gross annual revenue from canal tolls | $3,254,051 | | |
| Gross annual earnings of railroads | 5,941,435 | | |
| | | | 9,195,486 |
| Expenses for maintenance of canals | $637,580 | | |
| Expenses for maintenance of railroads | 2,645,186 | | |
| | | | 3,282,766 |

In order to make a just comparison between the annual receipts of the railroads, and those of the canals, it is necessary to add to the tolls, the sums paid to those engaged in the transportation of products on the canals; the tolls being merely an equivalent for the use of the canal or way, constructed by the State; whereas the railroad companies furnish not only the road-way, but the vehicles in which the commodities are laden, and the motive power. Those engaged in the transportation business on the canals, have four or five millions invested in boats, horses, &c., and the annual expenses for persons employed in managing the boats and horses, and the maintenance of the force necessary to attend to the transportation business, is very great. The sums paid for transportation on all the canals in 1849, separate from in the State tolls, was equal to $2,459,963; add to this the tolls of the same year, $3,268,226, and the total is $5,764,189. In 1847 the total sum paid on account of tolls and freight on the canals, was equal to $8,453,533. This large sum was paid in 214 days of 1847, merely for moving the property which passed on the New York canals. Assuming that the transportation on the canals for 1850, was the same as in 1849, it makes with the tolls of 1850, a total of $5,750,014.* This is the sum paid in the year 1850, for the mere transportation of persons and property, on the canals and rail-

* The total will then be as follows, for the year ending 30th September 1850:—

| | |
|---|---|
| Received for tolls and transportation on all the State canals | $5,750,014 |
| Received on the railroads within the State | 5,721,572 |
| Total | $11,471,586 |

roads within the limits of New York, and not including the Delaware and Hudson Canal, or the transportation on the Hudson River.

In comparing the relative cost of canals and railroads, as given in the preceding tables, it is to be understood that many items enter into the "construction account" of railroads, which are excluded from the cost of canals. Some of the railroads pay interest on stock before the road earns anything, and this is added to the cost; in borrowing money they receive 85 or 97 cents from the lender, and issue bonds for 100; this difference, with interest on the bonds issued, is added to the cost of the road. In some cases the old superstructure is removed and a new and more expensive one is substituted, and the entire cost of the new one is added to "construction account," and no deduction made for depreciation on account of the old one.*

On the State canals, the law prescribes a rule which excludes all repairs from the original cost of construction; when the acting commissioner has completed a new canal, or a section of it, he reports the fact to the Canal Board, and that board appoints a superintendent, with whom an account is opened and all expenditures are thereafter charged to the account of "*repairs.*" If money has been borrowed for the work, the interest does not come in to swell the "construction account," the latter account being charged simply with the sums advanced to the acting commissioner, and by him paid to the contractor who constructs the canal, and the superintending engineer for his salary. And thus, at the close of 1838, when thirty-one millions had been expended on the Erie and Champlain Canals, including more than nine millions for interest and repairs, the "construction account" of those canals stood at $8,401,394 12, this account not having been increased from 1826, when these works were completed. The wooden structures on the canals are replaced once in about eight years, and new locks, aqueducts, &c., are constructed and charged to the account of repairs. Although the cost of the State canals, in the preceding table, is given at $35,155,237, the whole expenditure by the State on account of all the State canals, from 1817 to 1850, exceeds *ninety-three millions of dollars.*

The New York and Harlem Railroad was chartered in 1831. In 1834, only four miles were in operation, to Yorkville. The capital was originally $350,000; increased to $750,000 previous to 1839. In the latter year the company had finished seven and a half miles, at a cost of $1,035,000, and were authorized to increase the capital to $1,950,000. In 1840, power was given to extend the road through the county of Westchester, to connect with the Albany Railroad, and the sum of $1,000,000 was added to the capital of the company. In 1845, an act was passed, authorizing this company to extend their road from White Plains to Albany. The road was completed to Dover, in Duchess County, 80 miles from the city of New York, in 1848–9. It is now under contract from Dover to Chatham, about 50 miles, where it will connect with the road from Boston to Albany. From this point the Harlem Road will, in a short time, be connected with an extensive chain of roads extending through Vermont, and will afford to a portion of the inhabitants of that State, and of Massachusetts, a more direct route to the city of New York than they have heretofore had.

The New York and Erie Railroad was opened to Dunkirk on the 15th of June, 1851. It was finished within the time specified in the law of 1845,

* The engines, cars, and all expenses for the equipment of the roads are also embraced in the preceding table of cost. On the canals, the boats, horses, &c., are the property of individuals.

to entitle the company to a release from the State lien of $3,000,000, and the claim has been canceled. This is a relief to the company of $6,256,261 55, being the amount of principal and interest on the stock loaned to the company from 1842 to the time of payment. In revising the line of the road, it became necessary to pass for a short distance within the jurisdiction of Pennsylvania. In granting the request of the company, the Legislature of that State affixed a condition that, after the road is completed to Lake Erie, the company shall annually thereafter pay $10,000 into the Treasury of Pennsylvania. This is an illiberal provision, unless the money is received as an equivalent for taxes and other exemptions.*

Previous to 1845, as stated by the President of this company, about five millions of dollars had been expended, at which time the company had in operation 46 miles of road, the condition of which was such as hardly to permit a train of cars to pass over it with safety; and two millions, which had been expended west of Binghampton, was of little value, owing to the decay of materials by the use of piles, and a change of the line to improve the grade.

The subscribers to the stock of three millions of dollars in 1845, were assured by the directors, that interest at the rate of 6 per cent per annum should be paid to them semi-annually, "from the date of their respective payments, until a single track of the road shall be completed and put in use from the Hudson to Lake Erie, and also a branch to Newburg." This promise was faithfully kept, and the last instalment of interest has been paid since the road was opened to Lake Erie. Hereafter the stockholders will be dependent for dividends on the net earnings of the road. The amount of capital stock paid in is $5,801,285 29.

Heavy expenses have been incurred in altering the line, reducing the grade, and erecting permanent and durable structures. To produce a comparatively even surface, for a distance of 445 miles, over the mountains and across the rivers and ravines which interpose between Piermont, on the Hudson River, and Dunkirk, on Lake Erie, so as to permit the passage of trains of cars at the rate of twenty-five miles an hour, is a work of no ordinary character.

Three miles west of Port Jervis, the Delaware River is crossed on a bridge 800 feet in length, sustained on piers of masonry and arches of 150 feet span, the grade of the road being 40 feet above the water in the river. The Lackawaxen River is crossed by a bridge 450 feet long, and above this point the road recrosses the Delaware, from Pennsylvania to New York, on a bridge 580 feet in length. There is a third bridge across the Delaware at

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* When Massachusetts desired to extend a railroad from Boston to the Hudson River, passing nearly forty miles through the territory of New York, a law was passed by the latter State, to appoint commissioners to facilitate the measure, and an appropriation was made to defray the expenses of a survey of the road to the State line; and the law also contains the following provision:—"If the State of Massachusetts shall construct a railroad from Boston to the eastern boundary of this State, either directly, or through the medium of an incorporated company, the Legislature of this State will construct it from thence to the Hudson River, or grant to the State of Massachusetts, or some authorized company, the right of so doing, and taking toll thereon under proper restrictions as to jurisdiction." Although the obvious tendency of the Massachusetts Road was to divert a portion of the trade of the Erie Canal from the city of New York, yet the Legislature was willing to make a free grant to those interested in the road of the same privileges as if they were citizens of New York. And in the management of the public works of New York, the State has uniformly resisted all attempts to establish any discrimination, either in the rates of toll or otherwise, between our own citizens and those of other States and Canada in the use of the canals. If these works had been constructed by the General Government, as was contemplated at one time, the privilege of using them by citizens of all the States could not have been more impartially dispensed by the National Government than it has been by the government of New York. Instead of losing by this liberal policy the interests of this State have obviously been promoted by it.

roads within the limits of New York, and not including the Delaware and Hudson Canal, or the transportation on the Hudson River.

In comparing the relative cost of canals and railroads, as given in the preceding tables, it is to be understood that many items enter into the "construction account" of railroads, which are excluded from the cost of canals. Some of the railroads pay interest on stock before the road earns anything, and this is added to the cost; in borrowing money they receive 85 or 95 cents from the lender, and issue bonds for 100; this difference, with interest on the bonds issued, is added to the cost of the road. In some cases the old superstructure is removed and a new and more expensive one is substituted, and the entire cost of the new one is added to "construction account," and no deduction made for depreciation on account of the old one.*

On the State canals, the law prescribes a rule which excludes all repairs from the original cost of construction; when the acting commissioner has completed a new canal, or a section of it, he reports the fact to the Canal Board, and that board appoints a superintendent, with whom an account is opened and all expenditures are thereafter charged to the account of "*repairs.*" If money has been borrowed for the work, the interest does not come in to swell the "construction account," the latter account being charged simply with the sums advanced to the acting commissioner, and by him paid to the contractor who constructs the canal, and the superintending engineer for his salary. And thus, at the close of 1838, when thirty-one millions had been expended on the Erie and Champlain Canals, including more than nine millions for interest and repairs, the "construction account" of those canals stood at $8,401,394 12, this account not having been increased from 1826, when these works were completed. The wooden structures on the canals are replaced once in about eight years, and new locks, aqueducts, &c., are constructed and charged to the account of repairs. Although the cost of the State canals, in the preceding table, is given at $35,155,237, the whole expenditure by the State on account of all the State canals, from 1817 to 1850, exceeds *ninety-three millions of dollars.*

The New York and Harlem Railroad was chartered in 1831. In 1834, only four miles were in operation, to Yorkville. The capital was originally $350,000; increased to $750,000 previous to 1839. In the latter year the company had finished seven and a half miles, at a cost of $1,035,000, and were authorized to increase the capital to $1,950,000. In 1840, power was given to extend the road through the county of Westchester, to connect with the Albany Railroad, and the sum of $1,000,000 was added to the capital of the company. In 1845, an act was passed, authorizing this company to extend their road from White Plains to Albany. The road was completed to Dover, in Duchess County, 80 miles from the city of New York, in 1848–9. It is now under contract from Dover to Chatham, about 50 miles, where it will connect with the road from Boston to Albany. From this point the Harlem Road will, in a short time, be connected with an extensive chain of roads extending through Vermont, and will afford to a portion of the inhabitants of that State, and of Massachusetts, a more direct route to the city of New York than they have heretofore had.

The New York and Erie Railroad was opened to Dunkirk on the 15th of June, 1851. It was finished within the time specified in the law of 1845,

* The engines, cars, and all expenses for the equipment of the roads are also embraced in the preceding table of cost. On the canals, the boats, horses, &c., are the property of individuals.

to entitle the company to a release from the State lien of $3,000,000, and the claim has been canceled. This is a relief to the company of $6,256,261 55, being the amount of principal and interest on the stock loaned to the company from 1842 to the time of payment. In revising the line of the road, it became necessary to pass for a short distance within the jurisdiction of Pennsylvania. In granting the request of the company, the Legislature of that State affixed a condition that, after the road is completed to Lake Erie, the company shall annually thereafter pay $10,000 into the Treasury of Pennsylvania. This is an illiberal provision, unless the money is received as an equivalent for taxes and other exemptions.*

Previous to 1845, as stated by the President of this company, about five millions of dollars had been expended, at which time the company had in operation 46 miles of road, the condition of which was such as hardly to permit a train of cars to pass over it with safety; and two millions, which had been expended west of Binghampton, was of little value, owing to the decay of materials by the use of piles, and a change of the line to improve the grade.

The subscribers to the stock of three millions of dollars in 1845, were assured by the directors, that interest at the rate of 6 per cent per annum should be paid to them semi-annually, "from the date of their respective payments, until a single track of the road shall be completed and put in use from the Hudson to Lake Erie, and also a branch to Newburg." This promise was faithfully kept, and the last instalment of interest has been paid since the road was opened to Lake Erie. Hereafter the stockholders will be dependent for dividends on the net earnings of the road. The amount of capital stock paid in is $5,801,285 29.

Heavy expenses have been incurred in altering the line, reducing the grade, and erecting permanent and durable structures. To produce a comparatively even surface, for a distance of 445 miles, over the mountains and across the rivers and ravines which interpose between Piermont, on the Hudson River, and Dunkirk, on Lake Erie, so as to permit the passage of trains of cars at the rate of twenty-five miles an hour, is a work of no ordinary character.

Three miles west of Port Jervis, the Delaware River is crossed on a bridge 800 feet in length, sustained on piers of masonry and arches of 150 feet span, the grade of the road being 40 feet above the water in the river. The Lackawaxen River is crossed by a bridge 450 feet long, and above this point the road recrosses the Delaware, from Pennsylvania to New York, on a bridge 580 feet in length. There is a third bridge across the Delaware at

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* When Massachusetts desired to extend a railroad from Boston to the Hudson River, passing nearly forty miles through the territory of New York, a law was passed by the latter State, to appoint commissioners to facilitate the measure, and an appropriation was made to defray the expenses of a survey of the road to the State line; and the law also contains the following provision:—"If the State of Massachusetts shall construct a railroad from Boston to the eastern boundary of this State, either directly, or through the medium of an incorporated company, the Legislature of this State will construct it from thence to the Hudson River, or grant to the State of Massachusetts, or some authorized company, the right of so doing, and taking toll thereon under proper restrictions as to jurisdiction." Although the obvious tendency of the Massachusetts Road was to divert a portion of the trade of the Erie Canal from the city of New York, yet the Legislature was willing to make a free grant to those interested in the road of the same privileges as if they were citizens of New York. And in the management of the public works of New York, the State has uniformly resisted all attempts to establish any discrimination, either in the rates of toll or otherwise, between our own citizens and those of other States and Canada in the use of the canals. If these works had been constructed by the General Government, as was contemplated at one time, the privilege of using them by citizens of all the States could not have been more impartially dispensed by the National Government than it has been by the government of New York. Instead of losing by this liberal policy the interests of this State have obviously been promoted by it.

Deposit. Between the first bridge and the Lackawaxen River, the track is laid on a shelf 100 feet above the river, having on one side a sustaining wall of 16,000 cubic yards of stone work, and on the other a precipice. Three miles of the road, on this line, cost $300,000.

In passing west over the high lands between the Delaware and Susquehannah Rivers, there is an ascending grade of 57 feet per mile, for seven and a half miles, and from the gulf summit a descending grade of 60 feet for eight miles to Lanesboro; this is the maximum grade on the whole line. The construction of a section of one mile, at the gulf summit, cost $200,000. The "Cascade bridge" is constructed over a chasm 180 feet in depth, with one span 275 feet in length; within a short distance of this place the road is carried over a creek and ravine on a massive stone structure, called the "Starucca Viaduct," at an elevation of 100 feet, requiring eighteen stone piers and arches, containing 22,000 cubic yards of masonry, at a cost of $320,000. There is a bridge across the Susquehannah 800 feet long.

In referring to the improvements in the line of the road since 1845, Mr. Loder states that "the line, as now constructed, will have between Dunkirk and the Hudson River, about 300 miles of level or slightly ascending grade, of not exceeding five feet to the mile."

The President, Mr. Loder, also alludes to the valuable services of the following engineers: Major Brown, and Horatio Allen, chief engineers; Silas Seymour, L. J. Stancliff, and M'Cree Swift, the three latter having charge of the construction of large divisions of the line.*

The names of the officers under whose management the road has been constructed within the last five years, are as follows:—Benjamin Loder, President, Thomas J. Townsend, Treasurer, Nathaniel Marsh, Secretary. Directors, Henry Shelden, Daniel S. Miller, Henry Suydam, Jr., William E. Dodge, Shepherd Knapp, Samuel Marsh, Cornelius Smith, Homer Ramsdell, William B. Skidmore, Marshall O. Roberts, Thomas W. Gale, Charles M. Leupp, Theodore Dehon, John J. Phelps, Norman White.

The Hudson River Railroad was chartered in 1846, but the subscription not being filled, the charter was amended in 1847, allowing the payment of interest on subscriptions. The commissioners, to get subscriptions, and directors, in 1847, were John B. Jervis, Saul Alley, Stephen Allen, James Hooker, James Boorman, James N. Wells, Robert Kelly, William Chamberlain, Gardner G. Howland, Fortune C. White, Gouverneur Kemble, Aaron Ward, and Thomas Suffren. These persons made large subscriptions themselves, and by their great personal efforts obtained the required capital of three millions of dollars. It was a condition of the subscription that interest, at the rate of 7 per cent, should be paid from the date of the first instalment until the road was finished to Albany.

This road was completed from New York to Poughkeepsie, seventy-five miles, at the close of 1849. In this distance there is 3,376 feet in length of tunneling, including the brick arch of 600 feet for passing under the Sing Sing prison yard. The principal tunnels are one at New Hamburgh, through compact lime stone, 800 feet long; one through Breakneck Hill, 500 feet, and one through Anthony's Nose, 350 feet; the two latter in the granite of the Highlands. The width of the tunnels is twenty-four feet, and the height eighteen. In the line from New York to Poughkeepsie,

* For the early history of this road, see vol. xv., of this Magazine, page 359.

forty-four miles are exposed to the river, and there is thirty-seven miles of protection wall on the river side.

The highest grade, on this road, is fifteen feet to the mile, at Poughkeepsie—there is another of thirteen feet, and others of ten—but these are only for short distances, and generally at stopping places, where the rise is of no practical importance. For nearly the whole distance from New York to Albany, the grade corresponds with the tide level.*

In addition to the cash capital of three millions of dollars, the company was authorized to issue one million of stock to pay interest on the subscription. The interest was paid in cash until 1849, since which time it has been paid in stock, at par. When the road is finished to Albany, the interest is to cease, and the stockholders will depend for dividends on the net earnings of the road. Four millions of dollars have been borrowed on a first mortgage of the road, and loans have been negotiated for two millions on a second mortgage. This makes a total of four millions of stock and six millions of debt.

The Delaware and Hudson Canal, extending from a point on the Hudson River, ninety-four miles above the city of New York, to Honesdale, in Pennsylvania, 107 miles, with a railroad from the latter place to Carbondale, sixteen miles, is the work of a private company, operating under charters obtained from the States of New York and Pennsylvania. This work was completed in 1829, at a cost of $2,305,599 50. As originally constructed, the locks were seventy-six by nine feet, the water is thirty-six feet wide on the surface, and four feet deep. Between 1841 and 1844, such improvements were made in enlarging the canal and doubling the track of the railroad, for ten miles, and otherwise improving the work, that in the latter year, 255,000 tons of coal were transported over the railroad, and boats were able to navigate the canal with cargoes of forty-five tons, being an increase of more than 50 per cent on the original canal cargo, and more than 100 per cent on the original capacity of the railroad. Subsequently the company added six inches more to the depth of water in the canal, so as to permit the passage of boats, in 1846, of fifty to fifty-five tons, the capacity of the canal being adequate to the transportation, annually, of 850,000 tons of coal.

The company is now engaged (1851) in again enlarging the canal, so as to give a depth of six feet, and a width at bottom of thirty-two feet of water, the surface width being generally forty-five feet, allowing the use of boats with a cargo of 130 tons. The new locks are 100 feet long and 15 wide. It is estimated that this improvement will more than double the capacity of the canal; and it has been made to allow the transit of an increased quantity of coal brought to the canal by the Pennsylvania Coal Company, which has constructed a double track railroad from the canal, at Hawley, a distance of forty-five miles, to another section of the northern coal field. The extent of the canal within the limits of New York, is eighty-four miles, and the expenditure, within the State, to August, 1851, is $3,871,620.

This company, after its charter was obtained, in 1823, sent an engineer to England to obtain information in regard to the construction of railroads. And Horatio Allen, Esq., chief engineer of the Erie Railroad, stated in a

* A history of the commencement and progress of this road to 1850, is given by the Engineer in vol. xxii. of this Magazine, page 278.

speech at the opening of that road, that the first trial of a locomotive engine on the Western Hemisphere, was made by himself on the Carbondale Railroad, in the year 1828.

This company has constructed four "*wire suspension aqueducts*" for carrying the canal across the Delaware and other rivers. These structures are of a novel and interesting character, and are in the highest degree creditable to the skill of the engineer, who constructed them, and the enterprise of the company. The following description of these aqueducts has been obtained from R. T. Lord, Esq., chief engineer of the Delaware and Hudson Canal.

The aqueduct over the Delaware River, connecting Pike county, in Pennsylvania, with Sullivan county, in New York, was constructed in the years 1847 and 1848. Another over the Lackawaxen, in Pennsylvania, in 1849, and one over the Neversink, and another over the Rondout, in New York, in 1850. These aqueducts are constructed on the plan of the Pittsburg Suspension Aqueduct, a structure which has proved eminently successful, and was the first of its kind in the world, designed and executed by JOHN A. ROEBLING, Esq., civil engineer, of the city of Pittsburg. After an examination of this work, by Mr. Lord, a contract was entered into for the erection of the superstructure of those on the Delaware and Hudson Canal.

"The trunks are composed of timber and plank, well joined and caulked, and suspended to two wire cables, one on each side. The cables rest in heavy cast iron saddles, which are placed on top of small stone towers of about four by six feet base, rising four to five feet above the tow path. The towers are each composed of three blocks of white quartz pudding stone. There is a tow path on each side of the trunk. The cables are made in one length across the rivers, from abutment to abutment, and connected at their ends with anchor chains, manufactured of solid wrought iron, in bars of from five feet to ten feet long, and five to six inches wide, by one and a half inches thick. The lower end of each chain is secured to a heavy cast iron anchor plate of six feet square, which supports the foundation of a large body of masonry, the weight of which resists the strain of the chain and cable. As the cables are protected against oxydation by a copious varnish and paint, and closely encased by a tight wire wrapping, which gives them the appearance of solid cylinders, they may be considered as indestructible."

The following table exhibits the principal dimensions and quantities of the Delaware aqueduct:—

| | | |
|---|---|---|
| Hydraulic cement masonry, in abutments, piers, and anchorage | cubic yards | 7,688 |
| Length of aqueduct, with extensions | feet | 600 |
| Number of spans (varying from 131 to 142 feet) | | 4 |
| Width of trunk at water-line | feet | 19 |
| Depth of water in aqueduct | feet | 6½ |
| Weight of water between abutments | tons | 1,950 |
| Weight of water in one span | tons | 487½ |
| Diameter of wire cables | inches | 8½ |
| Length of wire weighing one pound | feet | 17½ |
| Number of wires in each cable | | 2,150 |
| Total weight of cables and anchor chains | lbs. | 190,000 |
| Ultimate strength of each cable | tons | 1,900 |

The bottom of the aqueduct is elevated twenty-eight feet above the waters of the river.

The Neversink aqueduct has one span of 170 feet, the wires in each cable are 2,880, the cables nine and a half inches in diameter, and the ultimate strength of the cables 5,200 tons; tension of cables 998 tons. The aque-

duct at the Highfalls has one span of 145 feet—weight of water 538 tons—tension of cables resulting 790 tons—number of wires in each cable 2,300—ultimate strength of cables 4,100 tons.

Mr. Lord states that from the most careful attention and inspection of these aqueducts, in this State and in Pennsylvania, he is "decidedly of the opinion that the plan, as designed and executed by John A. Roebling, Esq., secures the best combination of wood and iron that has ever been effected for works of the kind, both in regard to economy and durability. With the exception of wooden trunk, (which may be economically made of plate iron,) all the important portion of the work will last, it may be said, an indefinite period."

Railroad Gauges. On the New York and Erie Railroad, the iron rails on which the cars and engines run, are placed six feet apart, that company having adopted what is called the "wide gauge." The branch roads from Ithaca to Owego, from the head of Seneca Lake to Elmira, from Corning to Canandaigua, and from Chester to Newburg, are constructed of the same width. The rails on the Central Line from the Hudson River to Buffalo, are four feet eight and a half inches apart, and most of the other railroads in the State are of the same gauge, including the Hudson River, the Harlem, the New Haven, and the Northern road, from Ogdensburg to Lake Champlain.*

The following railroads are in process of construction: from the Buffalo to the Pennsylvania line, along the shore of Lake Erie, sixty-seven miles—from Sacketts Harbor to Ellisburg, twenty-three miles—and one from Buffalo to Hornellsville, Steuben county, ninety miles. This road is to connect with the New York and Erie Railroad. The road from Canandaigua to Corning, in Steuben county, commenced operations in the latter part of September, and by this route passengers are carried from Buffalo to New York in eighteen hours, for the sum of $8 25. The fare on the Central Line, to Albany, and by the Hudson River Railroad, to New York, at two cents per mile, will exceed this, even when the distance is shortened by the direct line from Syracuse to Rochester. The Central Line of railroads has 235 miles of double track, between Schenectady and Rochester. The Hudson River Railroad has forty-two miles of double track between New York and Peekskill. The other roads have single tracks, with the necessary turn outs for passing trains. The Erie Railroad has established a Tele-

* At the late session of the Legislature a bill was reported, declaring that all railroads hereafter constructed in the State of New York, shall adopt either the narrow gauge of four feet eight and a half inches, or the wide gauge of six feet. There is a necessity for having connecting roads constructed on the same gauge; but the advantage of dividing an inch in fixing the gauge originally, and the peculiar charm in a width of exactly *four feet eight inches and a half*, in accommodating bulky commodities, and in promoting the comfort of passengers, and the power and speed of the engine, has never been satisfactorily explained. In a report respecting the "first Russian railroad," published in London in the year 1837, there is an allusion to an alteration of the gauge as then established. The engineer who commenced the road from St. Petersburg to Moscow, Chevalier von Gerstner, went to England in 1837, to contract for engines, rails, &c., for the Russian road. After alluding to the difficulty of procuring them, in consequence of the demand in England and America, the report says:—"Another difficulty arose from the Chevalier having altered the gauge of the Russian railroad from that established in England. On the old English railroads only goods of small bulk and great weight were transported, such as iron, coal, &c. In 1832, when the railway between Stockton and Darlington was begun, which was first intended for a general traffic of passengers and goods, Mr. George Stephenson, the engineer, established the breadth of the track between the rails at four feet eight and a half inches English, *as being the width of the track of carriage wheels on high roads.* Experience has shown how inconvenient this arrangement is; for the locomotive engines, usually of thirty horse-power, by this narrow gauge are confined within about four feet, which is by far too little for such an engine." After giving many other cogent reasons in favor of a broader gauge to accommodate the traffic in Russia, the report says:—"These and other reasons induced the Chevalier von Gerstner to adopt a gauge of six feet English between the rails: but the consequence was, that for the locomotive engines, turn plates, and machinery, new drawings and models had to be prepared.

graph line from Piermont to Lake Erie, at a cost of $50,000, which greatly aids their operations in managing their trains on a single track.

Structures on the State Canals. There are many structures on the public works of the State of great solidity and beauty. Between Albany and the lower aqueduct, across the Mohawk, there are thirty-seven locks which cost, on the average, $85,689 10 a pair, or, $42,844 55 for each lock. The old locks cost $10,000 each. The aqueduct across the Mohawk, about 1,100 feet long, and constructed entirely of stone, cost $346,856; the upper aqueduct cost about $200,000. The Rochester aqueduct cost $458,961. The old aqueduct originally cost $87,127 61. It was 802 feet long, and sustained by ten arches of fifty feet span. There are five pairs of combined locks, at Lockport, which cost over half a million of dollars. The old double locks cost $123,309, exclusive of excavation.

On the Chenango Canal, six reservoirs were constructed, to supply the summit level with water. The whole covered an area of a thousand acres. These reservoirs, besides aiding the Chenango Canal, have been useful in furnishing water for the eastern end of the long level of the Erie Canal.

Croton Aqueduct. Besides the improvements made by the State, and by incorporated companies, the city of New York, by a vote of its citizens, has undertaken and completed the Croton Aqueduct, one of the greatest works of the present age, at an expense to the city of about twelve millions of dollars. The aqueduct extends about forty miles, and crosses the Harlem River on a bridge 1,400 feet long, of massive stone masonry, sustained by arches more than one hundred feet in height.

Plank Roads. Within a few years more than two thousand miles in extent of plank roads have been constructed in this State, at a cost of $3,360,000, as stated in a work published by Mr. Kingsford.

Telegraph Lines. Within the last two years telegraph lines to the extent of about one thousand miles have been constructed within the limits of New York, under the arrangements of Henry O'Rielly.* The cost of these lines is about $300 per mile for a single wire, and $350 for two wires.

The extent of Morse's Line, within the State, is 1,004 miles.

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## Art. V.—THE MANUFACTURE OF IRON IN PENNSYLVANIA.†

No apology can be required for laying before the readers of the *Merchants' Magazine*, some statistics of the Iron Manufacture in the United States. While to the student of national economy such materials are indispensable, they cannot fail to be interesting to the general reader, who desires to acquaint himself with the resources of the country.

How far the facts stated should influence any conclusions upon the financial policy of legislation, upon the mutual relations of industrial classes at home, or upon the interchange of commodities with foreign producers, will be left to the consideration of each reader.

The design, at present, has reference mainly to a convenient classification

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* The whole extent of the O'Rielly lines in the United States exceeds seven thousand miles, constructed in about six years.

† For a series of tabular statements, embracing full and complete statistics of the manufacture of Iron in the State of Pennsylvania in the year 1850, see tables appended to the present number of the *Merchants' Magazine.*

of details of information which have been obtained by personal inspection and inquiry by the writer, at all of the iron works in the State of Pennsylvania. These details are arranged in tabular form. They have been already published in another connection; but it is proposed to give to them a more permanent record and a wider circulation through this Magazine.

It cannot fail to strike the mind of an inquirer as a remarkable fact, that of the whole number of counties in Pennsylvania (*sixty-two*) at the date of the investigation, forty-five actually contained iron works; and of the remaining seventeen, nine abound in iron and coal, so that only *eight* of the counties can be regarded as not suited to the manufacture of iron.

The following are the ten counties containing the largest number of works respectively:—

| | Works. | | Works. |
|---|---|---|---|
| 1 Berks | 41 | 7 Vernango | 21 |
| 2 Lancaster | 30 | 8 Columbia | 20 |
| 3 Clarion | 30 | 9 Center | 20 |
| 4 Huntington | 28 | 10 Armstrong | 18 |
| 5 Blair | 27 | | |
| 6 Chester | 25 | Total | 260 |

The following ten counties have the greatest amount of fixed capital invested in the business;—

| | | | |
|---|---|---|---|
| 1 Alleghany | $1,837,000 | 7 Columbia | $1,107,000 |
| 2 Armstrong | 1,388,000 | 8 Blair | 922,000 |
| 3 Lancaster | 1,273,000 | 9 Huntingdon | 896,000 |
| 4 Chester | 1,248,000 | 10 Luzerne | 702,000 |
| 5 Berks | 1,231,000 | | |
| 6 Clarion | 1,221,000 | Total | $11,825,000 |

The above statements relate to the ten counties at present most largely engaged in the business, but perhaps the greatest seat of the manufacture is destined to be in the north-western portion of the State, and the head waters of the West Branch of the Susquehannah, the Sismemahoning, and the Alleghany Rivers, a district embracing some of the counties now containing no iron-works.

This is probably the most elevated tract of country in the State, consequently the streams are all small and only navigable in one direction for short distances, by rafts and arks, and that, only during a few weeks in the spring of the year; and in part of the district the streams are so small as not to be navigable at any time. The roads are few and very bad. The whole of this tract of country is covered with a dense growth of very heavy timber; and is underlaid by numerous seams of bituminous coal, iron ore and limestone, being in fact the north-eastern extremity of the great Alleghany coal fields.

The larger portion of the minerals lie above the water level, and are so nearly horizontal in their stratification as to require no steam power to bring them to the surface nor to pump the water.

The population being very sparse, and there being no means of transportation to a market, the demand for agricultural products is confined to the immediate neighborhood of the farmer; the consumers being chiefly found among that portion of the inhabitants engaged in lumbering.

The inclination of the hill sides is much less abrupt here, than is generally the case in the mountainous parts of the State where the streams are larger and the valleys deeper; and in a large part of the district they are susceptible of cultivation all the way to the top.

The soil is peculiarly adapted to the cultivation of the lighter grains and root crops; but it would readily furnish enough wheat to supply any probable population.

It will probably remain in its present wild state until it shall be furnished with a cheap avenue to market, by the construction of the Sanbury and Erie Railroad, the southern experimental line of which passes directly through it.

As an illustration of the capabilities of the region, I would refer to the counties of Armstrong, Clarion, and Venango, in the western part of it, on the Alleghany River, which enables them to get their iron to market in arks during the spring freshets.

| Iron Works in each County. | In the year 1842. | In the year 1847. | Increase in five years. |
|---|---|---|---|
| Armstrong | 5 | 18 | 13 |
| Clarion | 8 | 30 | 22 |
| Venango | 9 | 21 | 12 |
| Total | 22 | 69 | 47 |

Showing an increase of 47 works in five years, or 314 per cent. In 1848 there was a rolling-mill completed in Armstrong county, being the only iron-works built in either of the three counties since 1847.

### PRODUCTION OF IRON FROM THE ORE.

The following table shows the number of furnaces of each sort and of bloomeries in the State. The capital invested in land, buildings, and machinery—their present capacity—the actual make in 1847, 1849, and the estimated make of 1850, respectively.

| Blast furnaces using | No. | Investment in real estate. | Pres't capacity. | Make, 1847. Tons. | Make, 1849. Tons. | Make, '50. Tons. |
|---|---|---|---|---|---|---|
| Anthracite Coal | 57 | $3,221,000 | 221,400 | 121,331 | 109,168 | 81,351 |
| Bituminous Coal | 7 | 223,000 | 12,600 | 7,800 | 4,900 | 3,900 |
| Coke | 4 | 800,000 | 12,000 | 10,000 | ..... | .... |
| Charcoal hot blast | 85 | 3,478,500 | 130,705 | 94,519 | 58,802 | 42,555 |
| Charcoal cold blast | 145 | 5,170,376 | 173,654 | 125,155 | 80,665 | 70,727 |
| Bloomeries | 6 | 28,700 | 600 | 545 | 335 | 280 |
| Total | 304 | $11,921,576 | 550,959 | 389,350 | 253,370 | 198,813 |

Of the 298 furnaces in the State, 144, or 48¼ per cent were out of blast on the 1st of May, 1850. In the autumn of the same year, the Secretary of the Treasury, Mr. Corwin, being desirous of knowing the then actual condition of the furnaces in the State preparatory to making his Annual Report to Congress, requested to be put in possession of the latest information on the subject.

In consequence of this request, the State was again canvassed, and information obtained from every furnace in it, from which it appeared that on the 1st of November, 1850, 167 furnaces, or 56 per cent were out of blast, showing a decrease of 23, in the number of active furnaces, equal to 7⅔ per cent in six months.

The make of 1850, above set down, was obtained simply by deducting from the known make of 1849, the product of such furnaces as were at work in the former year and not in the latter. Nothing was allowed for any diminution consequent on a further decline in price which took place in the latter part of the year, nor for stoppages and failures.

Fifteen furnaces were sold by the Sheriff in the first four months of the

year; and other sales under execution have since taken place, which will probably reduce the make below the amount above stated.

A comparison of the make of 1850 with that of 1847, shows a decrease of 190,537 tons, or 49 per cent in three years.

Assuming that Pennsylvania makes one-half of all the iron produced in the United States, which, from the imperfect data obtainable, is the best estimate that can be formed. The above rate of decrease would give 381,074 tons for the whole Union, or about 1,000 tons more than the amount of iron and manufactures of iron and steel imported for that year.

It is difficult to estimate the product of the present year, without more data than are now in my possession, but I believe it will not vary materially from 150,000 tons.

The make of anthracite iron has not decreased the past year, from the fact that founders are obliged to mix a certain proportion of it with Scotch pig, which is not strong enough to be used alone. And the makers of cut nails have substituted it, to a considerable extent, for the Baltimore charcoal iron formerly used.

Nails cannot be made at present prices from a mixture of scraps and Baltimore pig, as has been the practice heretofore.

The greatest decrease of make this year will be found to be among the charcoal furnaces on the Alleghany River, where the distress has been most severe.

The hope so generally entertained at the commencement of the year, that an advance in the price of iron would take place before its conclusion, has not been realized; on the contrary, prices have receded.

On the 1st of January, 1851, English merchant bars were quoted in Liverpool at £5 5s.; September 6th, at £4 17s. 6d.; decrease 7s. 6d., which at an average cost of importation, say $7 50 to the £, would be equal to a fall in New York of $2 80 per ton.

But the depression of price here has not been much greater than this, owing to large shipments of iron to this market on foreign account, to be sold for what it would bring.

In January, 1851, English merchant bars were worth in New York (six months credit) $40; in September, 1851, do. do. $32 50; decrease, $7 50, or nearly three times the fall of price in Liverpool. In fact, at this time, September, 1851, iron can be bought in New York from three to four dollars per ton cheaper than it can be imported.

### CONVERSION OF CAST INTO WROUGHT IRON.

The following table shows the number of Forges and Rolling Mills in the State. The investment in lands, buildings and machinery. The total number of converting fires and their capacity per annum, and their make in 1847 and 1849.

| | No. works. | Investment in real estate. | No. forge fires. | No. pudding fur. | Capacity. Tons. | Actual make. 1847. Tons. | 1849. Tons. |
|---|---|---|---|---|---|---|---|
| Charcoal Forges.. | 121 | $2,026,300 | 402 | ... | 50,250* | 39,997 | 28,495 |
| Rolling Mills..... | 79 | 5,554,200 | ... | 436 | 174,400† | 163,760 | 108,358 |
| Total..... | 200 | $7,580,500 | 402 | 436 | 224,650 | 203,727 | 138,853 |

The make of 1849 shows a falling off from that of 1847 of 66,874 tons, or 33 per cent.

* 402 fires at 125 tons per fire per annum.

† 436 furnaces at 400 tons per furnace per annum.

In Eastern Pennsylvania, the manufacture of all descriptions of iron that come in competition with the English is extinct. All the markets accessible from the sea or the lakes being entirely supplied with the foreign article.

A small amount of Railroad Iron is still made for the interior, but this branch of manufacture shows the following decline:—

| | |
|---|---|
| Present annual capacity of the State | 64,400 tons rails. |
| Make, 1847 | 40,966 " |
| Make, 1849 | 18,973 " |

Decrease in two years, 21,993 tons, or 54 per cent.

The other Rolling Mills now running are sustained almost entirely by the manufacture of boiler plates and cut nails, which are less seriously affected by foreign competition, though the prices and the demand have been much reduced by it. The English cannot make, at any price, boiler plates equal to our best charcoal plates, but they now furnish all the inferior ones, as well as all the flue and sheet iron now sold.

Cut nails are exclusively of American invention and manufacture, and they have never been imported.*

*The total number of Nail Machines in the State is* 606. The annual production of each machine averages 1,000 kegs of 100 lbs. each, making 606,000 kegs, or 30,300 tons a year. Of the product of the Forges two-thirds are sold in the form of blooms to the Rolling Mills, and are manufactured into boiler plates, horse-shoe rods, and bars for the manufacture of scythes, axes, edge tools and cutlery, and other articles requiring a high polish. The remaining one-third is sold in the form of hammered bar iron in competition with Swedish and Russian iron.

The following is a list of all the Works in the State in the year 1850 engaged in the conversion of Steel:—

| County | Situation of Works. | Owners. | Am't ann'y converted. Tons. |
|---|---|---|---|
| *Eastern Pennsylvania*— | | | |
| Philadelphia | Kensington | Jas. Rowland & Co. | 600 |
| Philadelphia | Kensington | J. Robbins | 500 |
| Philadelphia | Kensington | Earp & Brink | 100 |
| Philadelphia | Kensington | Robt. S. Johnson | 400 |
| Philadelphia | Oxford | W. & H. Rowland | 700 |
| Lancaster | Martic | R. & G. D. Coleman | 400 |
| York | Castlefin | R. W. & W. Coleman | 100 |
| *Western Pennsylvania*— | | | |
| Alleghany | Pittsburg | Singer, Hartman & Co | 700 |
| Alleghany | Pittsburg | Coleman, Hailman & Co. | 800 |
| Alleghany | Pittsburg | Jones & Quigg | 1,200 |
| Alleghany | Pittsburg | Spang & Co. | 200 |
| Alleghany | Pittsburg | G. & J. H. Schoenberger | 200 |
| Alleghany | Pittsburg | S. McKelvy† | 178 |
| Total tons | | | 6,078 |

The total number of Iron Works of all kinds in the State is 504; the

* The price of Cut nails has steadily declined in consequence of improvements in the method of manufacture and of domestic competition, from 6 cents per lb, in 1839, to $2,80, the present rate. It cannot be reasonably doubted that a similar result must follow the permanent establishment of other branches of the Iron manufacture, and hence the fallaciousness of those arguments against initial protection, which are founded upon the assumption of a perpetual tax upon consumers.

† These works have only been in operation six months. Forty-four tons of the above amount is cast steel.

capital invested in lands, buildings and machinery, $20,502,076; the number of men employed, 30,103; the number of horses employed, 13,562.

The capital invested includes only such lands and buildings as belong to the Iron Master, and such as are directly dependant on the Iron Works for their value.

Thus the *value* of farms, grist and saw mills, and similar property, horses, wagons, tools and the like; and the dwellings of workmen near large cities, are excluded, because, though belonging to the works, they have an independent value.

The value of all coal land has been also excluded, both for the reason just given, and because it is the custom throughout the State, with very few exceptions, to purchase coal delivered at the works. The capital, and men, and horses employed in mining and transporting this coal to the works, and in transporting the finished iron to market, have also been excluded from the above account, because sufficient data were not in my possession for more than a conjectural estimate.

More than one-half of the Anthracite Furnaces, and a portion of the Charcoal Furnaces purchase their ore of the farmers in their vicinity, who dig it on their farms and haul it to the furnaces in the winter, and at other times when they are not more particularly occupied with their agricultural labors. There are other large and valuable ore banks in the State which belong to parties who work them and sell the ore to furnaces in their vicinity. The value of all these ore banks and the number of laborers employed at them, are excluded from the above account, which comprises only such real estate as belongs to persons in the iron business, and is indispensably requisite to carry on such business—and the *number* of men and horses directly employed by them.

The number of men thus engaged, over and above those reported to me as in the pay of the Iron Manufacturers, may be very nearly approximated by reference to the tables A and B, in the communication of S. J. Reeves, Esq., on the elementary cost of making pig and bar iron. On the basis of these tables I have calculated the number of laborers not in the pay of the Iron Masters, but directly dependant on the Iron Works for support, to be 7,081 for the Blast Furnaces, and 4,432 for the Rolling Mills, Forges, &c.; making together 11,513 to be added to the number above stated, or a grand total of 41,616 men dependant on the iron business in the State. Allowing five persons to each laborer, we have a population of 208,080 persons, or about one-tenth of the entire population of the State dependant on the manufacture of iron.

The *consumption of fuel* in all the Iron Works of the State in 1847 was as follows:—

| | |
|---|---|
| Anthracite coal, 483,000 tons, at an average value of $3 per ton..... | $1,449,000 |
| Bituminous coal, 9,007,600 bushels, at 5 cents..... | 450,380 |
| Wood, 1,490,252 cords, at $2*..... | 2,980,504 |
| Total value..... | $4,879,884 |

Both wood and coal are so abundant in the State that they have scarcely any value beyond the cost of the labor of getting them to market, and the amount sent to market is only limited by the demand. So that it cannot be

* This value is intended to include the cost of converting into charcoal, (the form in which it is generally consumed,) and delivering at the furnace. It is equivalent to five cents a bushel as the average value of charcoal.

said that to the owner of the wood or coal, it is a mere question as between buyers, for if the Iron Works stop, the demand and consequent production of fuel is curtailed proportionably. The wood has no value at all except for the Iron Works, as it is too bulky to bear transportation to any market; and in neighborhoods where there are no Iron Works, from $10 to $15 per acre is paid to clear and burn it off the land.

This feature gives a value to the Charcoal Iron interest in a Politico-Economic point of view, quite distinct from the mere production of iron.

It clears annually 37,000 acres of the timbered land in the State, without the loss of labor which is incurred by chopping and burning up the wood on the spot where it grew. By converting it into iron it becomes a source of profit, whereas without this demand, the timber, requiring so heavy an outlay in the commencement to clear it off, is an insuperable obstacle to the settler with small means.

In this way the making of Charcoal Iron benefits the State much more than any other branch of the iron manufacture; for in addition to the employment which it gives, in common with other branches of the business, to a large number of people, *it adds fifty-eight square miles annually to the amount of cleared and productive land*, increasing in a corresponding ratio the value of taxable property and the ability of the State to sustain population.

Any one not familiar with the topography of the State would suppose that the enormous consumption of one and a half million of cords of wood per annum would necessarily be of short continuance owing to a failure of the supply. But it certainly does not exceed one-fourth the ability of the State to furnish annually, for ever. The Alleghany Mountains divided into six or seven parallel ranges cross the State di-gonally from north-east to south-west. The higher portions of which ranges are too stony and steep for cultivation, but support a luxuriant growth of timber, which if cut down re-produces itself of sufficient size for the purpose of iron making, once in twenty years. Much the larger portion of these ranges has not yet been cut over the first time.

In fact the greater portion of the land heretofore cleared, has been put under cultivation.

The following statement of the Iron Works now running, or in running order, shows the number of each kind built in each period of 10 years previous to 1840, and in each year since that date. Also the number of failures in each of the last 10 years:—

| | Blast Furnaces. | | | | Bloomeries, forges, | | Total of | |
|---|---|---|---|---|---|---|---|---|
| | Mineral coal. | | Charcoal. | | and rolling mills. | | all kinds. | |
| | Built. | S. F.* | Built. | S. F.* | Built. | S. F.* | Built. | S. F.* |
| Ten years ending January 1st, 1730 | .. | . | .. | .. | 1 | .. | 1 | .. |
| " " " 1740 | .. | . | 1 | .. | 1 | .. | 2 | .. |
| " " " 1750 | .. | . | 2 | .. | 1 | .. | 3 | .. |
| " " " 1760 | .. | . | 2 | .. | 5 | .. | 7 | .. |
| " " " 1770 | .. | . | .. | .. | .. | .. | .. | .. |
| " " " 1780 | .. | . | 3 | .. | 2 | .. | 5 | .. |
| " " " 1790 | .. | . | 1 | .. | 4 | .. | 5 | .. |
| " " " 1800 | .. | . | 9 | .. | 16 | .. | 25 | .. |
| " " " 1810 | .. | . | 11 | .. | 19 | .. | 30 | .. |
| " " " 1820 | .. | . | 14 | .. | 16 | .. | 30 | .. |
| " " " 1830 | 1 | . | 18 | .. | 30 | .. | 49 | .. |
| " " " 1840 | 5 | . | 72 | .. | 46 | .. | 123 | .. |
| During the year..... 1840 | 3 | . | 3 | 3 | 6 | 3 | 12 | 6 |
| " " ..... 1841 | 1 | . | 3 | 1 | 2 | 1 | 6 | 2 |

* Sold by sheriff, or failed since January, 1840.

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| During the year..... | 1842 | 5 | 2 | 8 | 8 | 7 | 10 | 20 | 20 |
| " " ..... | 1843 | .. | 1 | 5 | 4 | 2 | 2 | 7 | 7 |
| " " ..... | 1844 | 4 | 6 | 13 | 2 | 4 | 3 | 21 | 11 |
| " " ..... | 1845 | 14 | . | 15 | 2 | 11 | 1 | 30 | 3 |
| " " ..... | 1846 | 11 | 1 | 30 | 3 | 12 | .. | 53 | 4 |
| " " ..... | 1847 | 8 | 1 | 12 | 15 | 5 | 8 | 25 | 24 |
| " " ..... | 1848 | 5 | 5 | 6 | 20 | 6 | 12 | 17 | 37 |
| " " ..... | 1849 | 3 | 5 | 2 | 30 | 5 | 6 | 10 | 41 |
| Four months in..... | 1850 | 3 | . | .. | 15 | 4 | 7 | 7 | 22 |
| Now unfinished..... | | 5 | . | .. | .. | 1 | .. | 6 | .. |
| Total..... | | 68 | 21 | 230 | 103 | 206 | 53 | 504 | 177 |

That portion of the preceding table which relates to the period prior to 1840 is of historical interest only. It shows a very regular increase in the number of works. The course of affairs for the last ten years is very clearly indicated by the table.

The great impetus given to the business about the year 1840, may be attributed to the discovery two years before, of the value of anthracite coal for iron making purposes. The lower clauses of the compromise tariff act coming into operation in 1842, and the passage of a new tariff act in that year together, produce the curious result of 20 new works built and 20 failures. The number of new works then steadily increases, and the number of failures as steadily decreases, until they stand in 1846—fifty-three new works built to four failures. But in that year the tariff of 1842 was repealed, and the present ad valorem duty laid on the price of foreign iron, which was then excessively inflated by the railway fever in England, and in the next year, (1847,) we have the number of new works and the number of failures again even, (25 to 24,) as in 1842, but with this important difference, that in 1842 distress was decreasing, whereas the difficulties of 1847 were only the beginning of more serious troubles. This is shown by the regularly diminishing number of new works, and the as regularly increasing number of failures, until we have for 1849 the new works only ten to forty-one failures.

The result has been asserted to be entirely the effect of over-trading, and to be in no respect attributable to the tariff of 1846—but it will be seen by reference to Mr. Walker's report to Congress for this year, that at the very time when we were making most iron, we were importing annually an average of 50,000 tons of pig and bar iron alone, exclusive of all chains, wrought iron, hardware, cutlery and steel, &c., &c. A business cannot be said to be overdone which is inadequate to the supply of the home market.

It may be well to note one other fact shown by the preceding statement. The year 1847 was that in which the largest amount of iron was produced, and also the first of the present series of disastrous years.

It is the custom with the manufacturers of Charcoal Iron to make their contracts in the winter for all the materials required during the year. The prices of these materials is governed by the selling price of iron at that time, but the greater part of a year elapses before the iron is made and brought to market.

Pig Iron in Glasgow depreciated in price 34 per cent this year, which produced a corresponding reduction here. Makers of small capital having contracted for their materials at the high prices ruling in the beginning of the year, and being obliged to sell at the low ones prevailing towards the close of it, were reduced to bankruptcy.

It will be seen by reference to the statement that two-thirds of the failures in the year were among the makers of Charcoal Pig Iron.

# Art. VI.—THE CULTURE AND COMMERCE OF COTTON IN INDIA.

NUMBER III.

NATURE AND PRESENT CONDITION OF INDIAN COTTON—IS INDIAN COTTON SUITED TO ENGLISH MANUFACTURES?—QUALITIES OF—OPINIONS OF MR. BAZLEY, MR. J. A. TURNER, MR. R. W. CRAWFORD, AND MR. CHAPMAN—DIRTY STATE OF INDIAN COTTON—SYSTEMATIC ADULTERATION—COTTON OF GUZERAT—ADULTERATION, ACCOUNT OF, BY MR. VAUPELL—CHAMBER OF COMMERCE.

It is evident that, before proceeding with the question whether India is capable of supplying more cotton for the manufactures of Europe, it is necessary to determine whether the manufacturers themselves do actually require, in large quantities, such cotton as the natives themselves use, and which India could most easily send: or whether it is some other kind or condition of cotton which is to be grown, or prepared, in India. The questions, it is clear, are very different; one dependent upon causes which have been, or may still be, in existence; the other, probably, on the proper application of knowledge and principles derived from other sources. We shall first discuss the nature and present condition of Indian cotton, and then proceed to improvements in cleaning and in culture of the different kinds of cotton, and ascertain of what quality and at what prices these can be produced in India.

With regard to the quality of Indian cotton, it will readily be admitted that some of it at least must be fitted for the purposes of cotton manufacture, if we consider only the substantial appearance and well-known durability of the far-famed Indian calicoes, or the delicacy of texture of the still more celebrated muslins of Dacca, as it was and still is, or of the Chunderee of the present day. These are described by Tavernier as "so fine, that you can hardly feel them in your hand;" while they have been described more poetically as "webs of woven air," and were attempted to be depreciated by an English writer of the 17th century calling them "only the shadow of a commodity." It may happen, however, that cotton, well fitted for such purposes when spun by the delicate fingers of the Hindoo, may yet be unfit for the iron handling of machinery. As it is, the weaver of the southern provinces depends for a part of the success of his manufacture upon the softness of his climate, while the stern Mahomedan of north-west India immures himself in underground workshops, of which the air is artificially moistened, in order to produce the beautiful fabrics which are prized by, and still adorn, the wealthy of his land.

It is probable however, that the cotton of different provinces of an extensive country like India may differ so much, that what is produced in one part may be fit for the purposes of the English spinner, while he may be unwilling to employ another even though esteemed for many native manufactures. The extent and regularity of the foreign demand for Indian cotton will often depend, in a great measure, upon the proportion brought to market of that which is of the best quality to that which is indifferent; and it is very certain that the best commodity may be sent in so dirty or adulterated a state to market, as greatly to depreciate its value, and interfere with its regular employment.

Indian cotton is well known to have certain good qualities of its own. By the natives of India it is esteemed for wearing well; in this country it is valued for its color. Mr. Bazley, in reply to a question by a member of the

Cotton Committee, stated that "the Indian cotton is always of a rich creamy color, and for its color it is frequently used as a mixture to improve the color of the worst or low American cotton." It is also thought well of for taking some dyes better than American cotton, and for its thread swelling in the process of bleaching; so that cloth made with it becomes more substantial in appearance. This property has long been known to the weavers of India. Thus Mr. Bebb, who was Resident at Dacca and afterwards a Director of the East India Company, stated, in 1789, that "the general distinction in quality the natives make, is, whether the thread made therefrom swells or not in the bleaching. That which is in the neighborhood of the city (Dacca) to the eastward is reckoned not to swell, if it be not used in the same season that it is gathered. The thread made of cotton produced in the south-east swells in bleaching, but less than the Hindostan cotton. The thread in the country west and north-west swells much in bleaching, more especially if it be hard twisted." These facts are interesting, as showing the minute attention paid by the natives of India to the cotton employed in their calicoes and muslins. But they do not prove the fitness of Indian cotton for English machinery, because most of it has one great defect, that is shortness of fibre, or of staple as it is called, which though capable of being twisted between the fingers, may yet be blown away during the various processes of machine spinning.

In wishing to ascertain the fitness of Indian cotton for English manufactures, it is useless to adduce the opinions of any but of those who have seen its practical working. For brokers even, who have spent their lives in the employment, are fallible, and spinners do not pronounce a final opinion on a sample of cotton, until they have seen by experiment the quantity of yarn it produces in proportion to the waste. But on this point we have excellent evidence from the Presidents of the two Commercial bodies of Manchester, though we have to regret that it is not in favor of Indian cotton; but the truth is at all times preferable to mystification. Mr. Bazley, President of the Chamber of Commerce of Manchester, examined by the Committee of the House of Commons on the growth of cotton in India, and who uses only the finest kinds, as he stated, "perhaps no spinner has bought as largely as I have (cotton) at 1s. 6d. per lb.:" and the author has been told that "Gardner and Bazley's is of the very highest class of yarns." With respect to the quantity of cotton imported from India, Mr. Bazley stated that it was, upon an average, about 10 to 13 per cent of the whole quantity imported into the country, but that the Indian cotton is so inferior, that the consumers have a table arranged to enable them to see, at a glance, what price they ought to give for it relatively to the American Orleans, or to the "Boweds." Thus, the spinner of No. 20 yarn says, when the Surat cotton is at 3d. a pound, it is his interest to give 3½d. a pound for American, for that he obtains from Surat only 12 ounces of yarn, whilst from American he obtains 13½ ounces.

SURAT AND AMERICAN COTTON AT EQUIVALENT PRICES.

| 1 lb. Surat, y'ld'g 12 oz. y'n. | 1 lb. American, 13½. | 1 lb. Surat, y'ld'g 12 oz. y'n. | 1 lb. American, |
|---|---|---|---|
| 3*d* | 3½*d* | 4*d* | 4⅝*d* |
| 3⅛ | 3⅝ | 4⅛ | 4¾ |
| 3¼ | 3¾ | 4¼ | 4⅞ |
| 3⅜ | 4 | 4⅜ | 4⅞ |
| 3½ | 4⅛ | 4½ | 5⅛ |
| 3⅝ | 4¼ | 5 | 6 |
| 3¾ | 4⅜ | | |

It does not, however, appear, from this table, whether this difference of price is owing to the intrinsic inferiority of the Indian cotton, or to the dirty state in which it is usually sent to market. Both causes have, no doubt, their influence. For Mr. Bazley, in reply to questions, stated that it was found by experience, that the waste in using Surat cotton is 25 per cent, whilst from the American the loss is 12½ per cent; that is, that from every 100 lbs. of Surat cotton which the spinner takes into his mill, he produces 75 lbs. of yarn; and that from every 100 lbs. of American cotton, he produces 87½ lbs.; also that the same machinery produces a larger quantity of yarn from the American cotton than from the Surat cotton, and when asked whether that does not arise from the smaller number of breakages, he replied—

"635. Yes; and from the American cotton requiring fewer turns from the spindle, and for the quantity of yarn coming through the rollers, less twist per inch.

"636. Are you aware whether the consumption of the Surat cotton is confined almost exclusively to the manufacture of the weft, that which runs across the piece, and not the warp, which is lengthways, in consequence of the Surat being so short in the staple?—In very coarse numbers the Surat is applied to warp purposes, but as the numbers increase, generally there is a mixture of the American with the Surat for weft."

A portion of the loss seems, however, to be made up, for Mr. Bazley further says:—

"639. Is it always easy to distinguish one from the other by the color? Yes, it is. From Surat cotton, which cost 3¼d., the yarn No. 20 is worth 5¾d.; and from American cotton, which cost 4¼d., the yarn is worth 6½d. You see that in using the American cotton, the spinner has actually a less amount for working the cotton than he has in the case of the Indian cotton; those are numbers 30; one is Surat, and the other American—[*handing in two other specimens*]—the Surat cotton for 30 cost 3½d., and the yarn is worth 7d.; the American cotton for 30 cost 4½d., and the yarn is worth 7¾d.; in that case the spinners have 3½d. for making the Surat cotton into yarn, but for making the American cotton into yarn only 3¼d."

"640. *Chairman.*] Do you suppose that the difference of a farthing is compensated or more than compensated by a smaller amount of loss in working up the American cotton?—Clearly by the greater turn off."

Provided that greater care was taken in cleaning the Indian cotton, it was stated that a speedy rise in price would take place in Liverpool. But mere cleaning is not sufficient, for some cotton from the neighborhood of Agra, which had been "cleaned admirably," was yet stated to be unsuited to the English market, and, like the general produce of India, inferior.

"734. What increase would be necessary of such cotton as you could buy and profitably work up, to affect the price of the American cotton?—Probably from 10 to 25 per cent of increase.

"735. How great an improvement in the cotton would be necessary to give you an article from India that you could buy and work up: you say that you do not buy much now?—An improvement of from 10 to 25 per cent would, I should say, vastly increase the consumption of Indian cotton; I now speak of the quality."

"745. Mr. *Bolling.*] From your knowledge of the state of trade, do you think that the import of Indian cotton into this country is likely to increase at all, as long as the native-grown cotton is adhered to?—I have seen some of the native cotton that is very little inferior to the American—the Surats;

but I am satisfied that the quality of the cotton must be greatly improved before we can use it to advantage."

Mr. Aspinall Turner, President of the Commercial Association of Manchester, was next examined. He, on the contrary, has "been a large consumer of Indian cotton for many years, and indeed was not aware of any one in Manchester consuming more Indian cotton than himself." He, however does not give a more favorable character of the Indian cotton, as fitted for general purposes. In the first place, Mr. Turner stated that there is very little refuse, technically called waste, in using American cotton, for the most of it could be disposed of, for "the purposes of inferior spinning;" while, of the Surat, a large portion comes which cannot be worked into inferior or coarse articles. But some of this, the author believes, can be used for wadding, and for paper-making. It is unfortunate that the word "Surat is frequently used to signify Indian cotton generally, because the best kind of Indian cotton, which is nearly equal in quality to middling Uplands, is produced in the neighborhood of Surat, and brings a higher price than any other Indian cotton from indigenous seed.

We shall immediately adduce Mr. Turner's opinion respecting the dirty state of Indian cotton. With regard to its quality, he said, "I do not think that there will be a very great increase in the importations of Indian cotton, if the quality remains of an inferior description, as hitherto;" but "if you can improve the quality of the Indian cotton, so as to meet the American cotton in the market, it will never fall off." So Messrs. Hollinshed and Tetly, the well-known brokers of Liverpool, in their circular for 1847 inform their constituents that, "of Surat cotton it is worthy of remark, that the consumption has been greater than in any former year, a sure indication of a bad trade." Marjor-General Briggs, well acquainted with the subject, and warmly disposed towards India, at a General Court of the East India Company, held on the 20th February of the present year, remarked: "As to the complaint of the Manchester gentlemen that they could not get cotton from India, that was owing entirely to the fact, that the cotton which they required was not such as the natives of India used."

Mr. R. W. Crawford, a Bombay merchant, took a contrary view to the great spinners of Manchester, for he stated, that "it is a question more of reduction in price at present than of improvement in quality;" and on being asked whether the spinners in Lancashire would purchase cotton for spinning in this country, such as is grown in India at present, and to the exclusion of American cotton, provided it was cheap enough, replied, "Yes, if they could buy it cheap enough for those purposes," and also, "if the cotton were cheap enough, its quality is sufficiently good to afford material for the spinning of three-fourths of all the cotton spun in this country at the present time." "Q. 2,759. For the great bulk of the trade they use the lower numbers?—"Yes; the great bulk of the trade spinning under 20's." So Mr. Chapman, Manager of the Great India Peninsular Railway Company, in his "Statement of Cotton Facts," addressed to T. Bazley, Esq., as Chairman of the Chamber of Commerce, Manchester, states, "that cotton of good quality, for English use, is always to be had in Berar (Central India, 300 to 400 miles from Bombay) at about 1½d. per lb., ranging of late years from 1¼d. to 1⅞d. The quality of this cotton is such, that at a certain relative difference of price (averaging about 15 per cent less for Indian than American,) it can be used instead of American for more than 50 per cent of our manufactures," that is, it will afford material for all yarns under No. 20. This is a question that can be

decided only by spinners and manufacturers; the author regrets that he has been unable, notwithstanding numerous inquiries, to obtain confirmation of the correctness of this opinion, though he would rejoice to do so, as the question would then be comparatively easy, especially as the cottons of Broach and Surat, districts situate close to the sea-coast, produce cottons which are considered superior in quality to those of the far distant territories of the Nizam. The author, however, has no doubt, from facts which will be afterwards adduced, that some of the indigenous cotton of India is fitted for the purposes described, and a portion of it for even higher numbers; but he believes that the great mass of the cotton produced in India is not so fitted from the shortness of staple. But an important practical inference may be deduced from the fact of the indigenous cotton of one part of India being longer in the staple than that of another, as they are both produced by the same species of plant. For if so, it becomes an important point to determine the physical states in which such cotton is produced, and to ascertain whether the same peculiarities of soil and of climate, with suitable culture, cannot be found in other parts of India.

With regard to the dirty state in which Indian cotton is sent to market, we shall see, that in the unchangeable East, things still are as they long have been. Thus, in 1803, we find it stated, "The native sort was not well cleared from seeds and extraneous matter." (*E. I. C.'s Cotton Papers*, p. 28.) In 1810, when a large quantity of cotton had been imported by the East India Company, we find that the Court of Directors writing to Bombay, "that no excuse will hereafter be admitted by us for the foulness, dirt, and seeds, which are suffered to remain mixed with the cotton; and it is our positive order, that the commissions be not paid to any commercial resident whose provision of cotton shall be faulty in this particular," (l. c. p. 35 and 36.) That no improvement has taken place, even up to the present time, with the great mass of Indian cotton, is clear from the evidence of Mr. Turner, who stated, "that in the spinning establishment of which I am at the head, we are in the habit of throwing upon the waste land an amount of dirt, for which we have paid 7,000*l.* per annum, chiefly consisting of soil, sand, dirt, and various extraneous matters which have been introduced, I suppose, or have never been cleaned out of the cotton. (Q. 789.)

The author, in a paper read before the Statistical Section of the British Association at Oxford, June 28, 1847, said: "Thus, at other times we are told, that the chief impediments to an increased consumption of Indian cotton, is the dirty state in which it reaches the manufacturer; this dirtiness being dependant, in the first instance, on the careless manner in which it is first collected, and then housed; or it is owing to the fraudulent additions made to it by the bunyas or wakarias, who purchase it from the ryots. Thus, it is sometimes adulterated with seed, cotton in seed, fine sand, or finely powdered salt, scattered over it at intervals; as the dews of night are allowed to fall upon it when spread out in an open court or yard, and before the sun is up it is packed into bales. Sometimes an inferior is mixed with a superior kind of cotton, by a process technically called 'flogging.' Further injury is sustained by the daily unloading when conveyed on bullocks. These, moreover, are described as eating up the cotton 'by mouthfuls out of the bales;' also that 'the brinjaries and cartmen themselves steal largely;' and finally that even the boatmen, in conveying the cotton from the tender to the ships, steal a good deal of cotton, as 'canoes and small boats come alongside, under one pretence or another, and receive the bundles previ-

ously prepared and secreted.' The same thing takes place in the conveyance of cotton from Broach to Bombay, as liquor boats come alongside those conveying the cotton, and exchange some of their arrack for cotton, which is abstracted from the bales, and its weight supplied with sand, mud, or salt water."

We may now produce proofs of the above statements, and see how all this dirt gets admission into the cotton. We shall take the evidence of those chiefly who are practically engaged in the subject, and shall see how much the cultivator is in fault, and how little he is encouraged to take any pains in improving the state of this great staple. We refer not to one, but to the principal cotton districts of India, some situated near the coast, others far in the interior, but all laboring under the same reproach of sending dirty cotton to market.

The province of Guzerat may first command our notice, as being one of the principal cotton districts of India, and having within it both Surat and Broach, the two places most celebrated for the goodness of the indigenous cotton. All parts of the district are, moreover, within a short distance of the sea-coast of the Gulf of Cambay. The produce is, moreover, conveyed only in carts and in the dry weather, it cannot, therefore, suffer from the state of the roads: while the freight from Broach to Bombay, as stated by the Bombay Cotton Committee, is as low as from London to Hull. Mr. Vaupell, who describes himself as having had several years' occupation and experience in the cotton trade, (from 1818 to 1826,) has published the result of his observations in the "Transactions of the Agricultural Society of Bombay." Mr. Vaupell says: "The cleanliness of the article depends mainly upon the attention bestowed in the gathering; but the cotton, as it comes from the gin, is beautifully clean, and if forthwith taken to the screws and packed in bales, would be all that could be desired; but it is generally either put into burkees or dokras, (large gunny or cloth bags,) in carts; and while so doing, is adulterated with seed, cotton in seed, fine sand, or finely powdered salt, scattered over it at intervals. Another mode of adulteration is, by having the entire area of the yard, or court, daily fresh cow-dunged about sunset in the evening; and the cotton, as it comes from the churkas, spread thereon before the ground is half dry. The dews of the night are then allowed to fall upon it, and early next morning, before the sun is up, it is packed into bales. This process, besides tinging and soiling the cotton with the wet cow-dung and earth, adds considerably to the weight of the article, while it materially injures it both in fibre and cleanliness.

"The cultivator has, generally speaking, no immediate inducement to render the produce of his fields unfit for the market, for in most cases he disposes of the cotton in seed, in the state in which it is gathered; from that moment his concern about it ceases, and it rests with the purchaser, or middleman, to prepare it for the exporter." These "agents employed between the grower and the exporter are generally Bannians, who, to the eastward of the Gulf of Cambay, are termed Wakarias. It is these people who find their interest in adulterating the cotton previous to disposing of it to the exporter." "Of late years the quality of the produce has deteriorated considerably, more particularly in respect of cleanliness."

This view is fully confirmed in the "Letter of the Bombay Chamber of Commerce to the Government of that Presidency," dated January 21, 1841, from which the author also quoted in the above paper.

"The baneful influence of these Wakarias or Middlemen, is considered by

the Bombay Chamber of Commerce as the principal cause which impedes the extension and improvement of the culture and trade of cotton in Western India, and which they characterize, 'as the state of hopeless pecuniary bondage in which the ryots are kept from one generation to another to the Wakarias and village Bunyans.' These men made advances to the ryots to enable them to sow their cotton, and to pay their assessment, purchasing the produce always before it is gathered, more frequently before it is ripened, often before it is even sown. It is the same class of persons, the Wakarias, to whom most of the frauds enumerated above are to be attributed, and till the baneful influence of these men is supplanted, either by the gradual settlement of a superior class of agents in the districts, or by bringing those districts, by the aid of steam, within the immediate and certain reach of the European merchants, all other measures, it is feared, will fail." Again, par. 55, "With the employment of all other modes of encouragement, this the committee consider to be after all the great, almost the only eventually effectual, remedy for the numerous causes, whether arising from poverty, from ignorance, from negligence, or from fraud, which at present obstruct the improvement in cotton."

Merwangee Hormusjee, who "served for several years, and with distinguished credit, as native agent for the provision of the Company's China and British Cotton investments," under Mr. Pelly, and who has since done much for the improvement of cotton, ascribes, "the principal cause of the cotton of India not fetching prices equal to that of America, &c., "to the very careless manner in which it (the cotton) is gathered from the plant, and immediately after thrown into deep pits (kullees) dug for the purpose, and in which it becomes mixed up with clods of earth, imbibes the night-dues (dews) whereby its color and quality become injured." Dr. Gibson, who is so well acquainted with the habits and modes of thinking of the Natives, says (*House of Commons' Return*) p. 60,) "They prefer the tolerably certain return received for the inferior article, to the trouble and expense required to produce cotton of superior cleanness." Dr. Johnston, Civil-Surgeon at Ahmedabad, attributes, (l. c.) among other causes, the little improvement in the gathering of cotton in Guzerat "to the better return which the merchant in Bombay finds for the uncleaned and cheaper cotton, than he does for the cleanly-gathered and dearer article." Mr. Vibart, the Revenue-Commissioner of Bombay, (*Return*, p. 66, writes, that "the cultivators find that as ready a sale is obtained for cotton in a dirty and adulterated state as when brought to the market in a clean and first-rate condition, while the difference of price between the two articles does not repay them for the additional time and labor."

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Large gains and great hazards must be more engrossing to the mind, and more stimulating to the passions than small and secure profits. The great drawback upon Commerce with very remote countries is, or was its gambling character, from the variety and seriousness of the risks, and the largeness of the profits laid on to cover them. By means of insurance against sea risks and other dangers, the losses are spread over so large a number that they cease to be losses, and become a mere tax, such as men may willingly pay for security. When a man has so introduced moderation into his gains and his losses, as to detach himself from the "cares of the world and the deceitfulness of riches," he may listen with a quiet pulse (as far as his own affairs are concerned) to the wind roaring over the sea, and need not be "afraid of evil tidings."

# JOURNAL OF MERCANTILE LAW.

## SALVAGE OF MERCHANT VESSELS BY BRITISH MEN-OF-WAR.

We published in this department of the *Merchants' Magazine* for September, 1851, a decision of Judge Grier, of the United States Court, in Admiralty, on a salvage claim by the officers and crew of a national vessel, in the case of Charles Robison, *et. al.* vs. Brig Huntress. We now subjoin a statement of two cases of salvage in which the officers and crews of British government vessels appeared as claimants, and which had been argued in the British Court of Admiralty at Singapore, before T. Church, Esq., Resident Counsellor.

One of these cases was that of the Charles Forbes, a ship of upwards of 1,000 tons burden, which while on her passage from Bombay to China, with a cargo of 4,400 bales of cotton, and 97 chests of opium, struck on the pyramid shoal in the Straits of Malacca, on the night of the 2nd of May, soon becoming completely bilged. On the following day the Peninsular and Oriental Company's steamer Malta, with the outward mails, hove in sight, and a boat was sent to her for assistance, but the commander of the steamer declined incurring the delay that might be caused by removing any of the cargo. He was, however, willing to take the crew, who were removed to the Malta, the commander, officers, and a few volunteers, all belonging to the Charles Forbes, returning to her with two boats for the purpose of saving some part of the cargo. The boats were loaded with 65 chests of the opium and departed the same day for Singapore, the ship having become a complete wreck. The Malta arrived at Singapore the following morning, and found five steamers lying in the roads, a Spanish steamer from Manilla, three Dutch war steamers, and the Hon. East India Company's steamer Pluto, attached to the naval force in the Straits. The latter was the only available vessel, the others having either come for mails, or to escort the new Dutch governor-general to Batavia. The Amazon, 26 guns, Capt. Barker, the senior British naval officer in the Straits, immediately got under weigh to proceed to the wreck, and ordered the Pluto to attend for the purpose of towing when necessary. They arrived at the wreck on the afternoon of the second day, the 6th of May, having met the boats of the Charles Forbes on the way, when the captain of that vessel, Commander Dumagne, removed to the Amazon for the purpose of affording information in saving the remainder of the cargo, sending on the boats with the opium to Singapore. The boats of the Amazon were immediately sent to the wreck, and thirty-one of the remaining chests of opium were removed. During the night bad weather set in, with a heavy sea, and the wreck began to break up. At eight the following morning nothing but the forepart of the ship remained, the cargo having been washed out; and the Pluto having lost two anchors, the vessels returned to Singapore, meeting on the way two other vessels, the Surge and the Mangoosteen, which were also proceeding to the wreck; $2,550, being one-fifth of the value of the property salved, had been tendered on the part of the underwriters, and refused.

It was argued on the part of the claimants that the property saved was a perfect derelict, having been abandoned by the master on the 3d of May, who had signed a document to that effect before leaving the Amazon, which was put in before the court, and that a moiety was the usual award on such occasions. It was also argued that the case displayed all the ingredients of salvage, viz., enterprise and risk, danger to the property, and promptitude in rendering assistance; and that the number of men among whom the award would be distributed would be little short of 400, a very large number.

On behalf of the underwriters, it was contended that promptitude would have been better displayed by despatching the Pluto at once, without retarding her

progress by making her tow and attend on a ship of so large a class as the Amazon; that, to establish a derelict, it was necessary to show that the captain had abandoned the ship without any intention of returning, which, it was contended, could not be done in this case, especially as he had left all his private property on board. It was also argued that it could not be said to be abandoned without hope of recovery, as the cotton was not calculated to sink, 1,400 bales having been picked up by fishermen and others in the neighborhood of Malacca, and that nearly every ship that had passed through the Straits in the course of the month had recovered a portion. That even if it could be proved a derelict, it was not necessary that an exorbitant proportion should be awarded as salvage, since in the cases of the Thetis and the Blendenhall, both derelicts, the award was one-eighth in the former case, and one-tenth in the latter, both these being cases in point, the services having been rendered by officers and crews of her Majesty's ships. It was also argued that this case presented an entirely new feature; indeed, one that was unparalleled. Steamers on such occasions were most valuable on account of the speed with which they could proceed to the scene of disaster, but this speed would be much diminished if they were allowed to take large ships in tow on such occasions. In this instance the senior officer's ship was only 1,000 tons burden, but they were often double that size. That, as the Amazon did not attend for the purpose of saving the ship, which was known to be a wreck, nor of the cotton, as although 4,000 or 5,000 bales were strewed about the ocean, not a bale was picked up by either the Amazon or the Pluto, the object must have been the opium, and as more than double the quantity remaining in the wreck had been carried away by the two boats, the Pluto could have effected this without the aid of the Amazon, and could also, as in the case of the Anne, have saved much valuable property, since she would have arrived in time to load before the breaking up of the ship. This new feature could only be met by the court so apportioning the award as to discourage senior officers from affording personal assistance in cases where their presence could only prove an impediment.

The court decided that the property salved was clearly a derelict, since the master had abandoned the Charles Forbes without the intention of returning, as shown by the fact of his having passed Malacca, where he might have obtained assistance, and proceeded at once to Singapore. The sum of $5,100, or two-fifths, was awarded to be apportioned among the officers and crews of the Amazon and Pluto, according to the prize proclamation. The value of the property salved was $12,750.

The other case was that of the Anne, Gamble, master, a barque of 356 tons, which, while on her passage from Singapore to China, laden chiefly with cotton, and seventy-eight chests of opium, struck on a reef at the eastern entrance to the Straits of Malacca on the night of the 25th of February. The Hon. East India Company's steamer Semiramis, on her voyage to the coast of Borneo, passing near the wreck, took out the opium, 400 bales of cotton, and the sails and stores. The value, as agreed on, was 42,000 Spanish dollars. The agents for the vessel had tendered $2,000, which had been refused. The only question in dispute was the amount of compensation for the services rendered, and the Court awarded the sum of $5,280, or one-eighth, with costs.

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LIABILITY OF RAILWAY CORPORATIONS FOR ANIMALS KILLED UPON THE TRACK.

In the Supreme Court of Michigan—January Term, 1851. Edward Williams *vs.* Michigan Central Railroad Company.

This is an action brought by the plaintiff against the defendants, in the Wayne County Court, to recover the value of certain horses killed by a locomotive and train of cars on the railroad.

The causes were submitted to the court below, on a written statement of the facts, by which it is admitted that the plaintiff resides about six miles south of the village of Wayne: that the horses in question were his property, and that

they strayed from his premises and were returning to Hamtramck, the place from which they had been previously taken: that they were on the track of the railroad near Dearbonville just before night on the 23d day of June, 1849, and were killed about one o'clock next morning, on the track of the road, between Dearbonville and the river Rouge. It is further admitted that one of the horses was killed about ninety rods east of Dearbonville; others at the first cattle guard, where a public highway crosses the railroad, and about sixty rods west of the Rouge Ridge; and others about sixteen rods east of said highway, they having jumped over the cattle guard. That the railroad was fenced on each side, from Dearbonville to the crossing of said highway, and that the horses came upon the track from the common at the village of Dearbonville, where there was no cattle guard, and when on were confined within a narrow lane in which they were killed. That said lane was the property of the defendants, and constituted the track of the railroad, over which their passenger and freight cars were accustomed to pass several times daily. That their passenger trains run with great speed twice each way every day, between Detroit and New Buffalo: that the horses were killed by the passenger train at the usual time of its passage over the road; and that the morning was dark and rainy. It is also conceded by the case that no by-laws restraining cattle from going at large, had been passed by the township of Dearbon, and that they were free comers.

The case thus submitted was reserved by the County Judge for the opinion of this Court.

*Curia per* PRATT J. The main question to be determined in this cause, is, whether upon the facts admitted by the case, the defendants are liable for the value of the horses killed. By no principle of law can they be rendered liable on such a state of facts. The defendants are the legal owners of the railroad, having acquired it by purchase and grant from the State. Whether their charter contains powers and privileges which were improvidently granted by the Legislature, is not a question to be considered here in deciding the case. But whether under their chartered rights, and in view of the facts submitted, they are liable to the plaintiff for the loss he has sustained, resulting from their act, in running their locomotive and cars, over their own railroad. Legally the defendants can be required to do no more in rendering the running of their cars safe to persons and property, than is required by the provisions of their charter, and the principles of the common law. By neither are they required to fence in their road, for the protection of other person's *domestic* animals, or for any other purpose whatever. By the charter, the defendants are required under heavy penalties "to keep the road open and in repair for use, from Detroit to Lake Michigan, and always have and keep in use thereon a sufficient supply of motive power and bars, both for persons and property, for the expeditious and convenient transaction of business, and the transportation of all persons and property offering for tranportation" (Sess. laws 1846, p. 56, sec. 21.) Under these penal requirements, the defendants were engaged in running a passenger train of cars, at the time the injury complained of by the plaintiff occurred. The running of the train was a lawful act, and within their chartered rights; it was upon their own railroad, of which they had, by the express terms of their act of incorporation, the entire and exclusive right of possession and control. No third person had any right to interfere, or to arrest the passage of the train, or, by any means impede its progress. The act, then, of running the cars being lawful, the defendants cannot be held liable for any accidental injury which may have occurred, unless the lawful right of running the train was exercised without a proper degree of care and precaution, or in any unreasonable, or unlawful manner. This is a principal of law well settled, neither new or anomalous. It is as old as any other principal of the common law, and alike applicable to every other kind of lawful business.

From the facts admitted by the case, it appears that the cars were running at a usual time, and that it was a dark rainy night; but it does not appear that the train was running at any greater speed than usual, or that the engineer conducting the train did not, in fact, exercise reasonable care and skill; nor can such an nference be legally drawn from the facts in the case. But it is insisted on the

part of the plaintiff, that in the township of Dearbon, horses were free commoners, and therefore rightfully on the railroad. This position cannot be sustained. In legal contemplation, the railroad is neither a public common, nor a public highway. The voters of the township of Dearbon could not by any power vested in them by the Legislature, confer upon the plaintiff the right of grazing his cattle and horses on the lands granted to the defendants, exclusively for the construction and use for their railroad. The provisions of the Statute relied on, confers upon the inhabitants of townships merely the right of determining the time and manner in which cattle, horses, and other animals, shall be restrained from going at large in the public highways. (R. S. p. 83. sec. 4.) By no possible construction, can this provision of the Statute include railroads; nor can it be supposed that the Legislature intended to have them included as highways, or to authorize individuals, through the power thus vested in the townships, to trespass on vested private rights. Nor does the act of 1847 which is referred to, and relied on, confer any such authority, or change the common law rule applicable to the case under consideration. This act provides merely, "that no person shall recover for damages done upon lands by beasts, unles in cases where by the by-laws of the townships, such beasts are prohibited from running at large, except where such lands are enclosed by a fence, &c." (Sess Laws of 1847, p. 181.) Thus far the act goes, but no farther, and it cannot be enlarged by implication or intendment. This suit is not brought under this act by the plaintiff to recover damage done on his lands, by the defendants' beasts; hence the act can have no legal bearing whatever on the case under consideration. The act does not require men to fence their lands, but merely precludes a recovery for damages done by beasts thereon, unless they are fenced. Nor does it grant any right to one individual to trespass on the private property of another, or to depasture at will railroads any more than other lands owned and possessed by individual citizens; nor can the Legislature, under the constitution, confer any such right. But there is another view to be taken of this point made in the case, and which must be regarded as conclusive. In the case of the Tonawanda Railroad Company *vs.* Muguer, (5 Denio R. 255,) the Supreme Court in giving a construction to the provision of their Statute of which our act of 1847 is a substantial copy, say, "that it is in its terms and spirit applicable to such lands only as are usually fenced, which cannot be done with the track of a railroad, and that no one ever supposed that such a strip of land, should be surrounded in its whole extent, by a fence, or that a fence could be maintained across the track at every intersection of a highway; that it would be entirely defeating the great object for which railroads are allowed to be constructed." This is undoubtedly a correct view of the subject; and the construction given to their Statute, is the only construction which can be given to our act of 1847, and protect the defendants in the enjoyment of their legal rights, and enable them to prosecute their business under their charter, without daily incurring the heavy penalties imposed upon them by the grant.

If the plaintiff, under the acts referred to, had no affirmative right to graze his horses on the track of the railroad, it follows, that they were there wrongfully; inasmuch as the common law gave him no such right. By way of illustration, suppose that the plaintiff's horses had gone into another man's wheat field, through a gate which had been left open by the owner, and killed themselves eating wheat; could the plaintiff have recovered of the owner of the wheat, the value of the horses, under the provisions of the act of 1847? Clearly he could not; the horses would have been in the field without right; hence wrongfully there. Nor could the owner of the wheat, having left his gate open, recover under the act the damage done by the horses.—Wheat fields are usually enclosed by fence, and in such a case the act would apply and legally bar a recovery. Brainard *vs.* Bush, (1 Cow. R. 78,) is a case in point. Bush made maple sugar in a piece of unclosed woodland, and left some syrup in his sugar works in an unclosed shed, to which Brainard's cow came in the night and drank, which caused her death. Chief Justice Savage in delivering the opinion of the court says, "although the defendant was guilty of negligence in leaving his syrup where cattle running at large might have access to it, yet the plaintiff having no right to permit his cattle to go there,

has no right of action." This decision goes no farther than to carry out an elementary principle of the common law. Horses in the town of Dearbon being free commoners, under some township rule or regulation, does not change the effect of this principle of common law, or the vested private rights of the defendants or other individual citizens. The idea that because horses and cattle are free commoners, that therefore they have the lawful right of trespassing on private property, is absurd—preposterous in the extreme. What are free commoners? Where may they run? In Holladay *vs.* Marsh (3. Wend. R. 147,) the Supreme Court says, " suppose a case where a town has no common land, and they pass a by-law permitting cattle and horses to run at large, where are they to run? Surely not on individual property. Where then?—in the highway? The public have simply a right of passage over the highway. The owner of the land through which the highway passes, is the owner of the soil, and the timber, except what is necessary to make bridges, or otherwise aid in making the highway passable: and if the owner of the soil owns the timber, why not the grass?" The doctrine established by this decision is in accordance with the fundamental principle of the common law, which has been recognized by elementary writers, and judicial decisions, in England and this country for a great length of time. Though every highway is said to be the king's, yet the king has nothing except the right of passage for himself and his people; the freehold and all the profits, as trees &c., belonging to the lord or owner of the soil, who may have an action of trespass for digging up the ground of the highway." (Cunningham's law dictionary, and also 3 Tomlin's law dictionary 788. 1 Burr 143, 3 Bacon 394.) Such has ever been the legal doctrine held in most if not all the States in the Union. (3 Kent Com. 433. 3 John. 363.. 8 Wend. 107, 12 ib. 98, 20 ib. 97. 6 Pet. 513, 10 ib. 25. 6 Pick. 57. 6 Mass. 454, 16 ib. 33. 5 Denio, 255. 4 Barbour S. C. R. 56.) The only decision found conflicting with this principle of law, which has been so long recognized and adhered to, is in Griffin *vs.* Martin, 7 Barbour's Sup. C. R. 297; a case recently decided by the Supreme Court of the State of New York, at a term held in Saratoga, by Justices Paign, Willard, and Hand; Justice Willard delivering the opinion, Justice Paign concurring, and Justice Hand dissenting: so that it was not the unanimous opinion of the court, and it is to be hoped that it may be overruled by the Court of Appeals, it being neither sound law, or just in principle.

But there is still another view to be taken, and which is equally decisive of the case. It is a well settled principle of law, that where an injury of which a plaintiff complains, has resulted from the fault or negligence of himself, or where it has resulted from the fault or negligence of both parties, without any intentional wrong on the part of the defendant, an action cannot be maintained. (John. 421; 1 Cow. 78; 19 Wend. 399 and the cases there cited; 21 ib. 615; 5 Hill 282 and the cases there cited in note (a,) 6 ib. 592; 5 Denio, 256; 4 Met. 49, 7 ib. 274.) The plaintiff resided in the vicinity of the railroad, and it is not only presumed to have known the legal rights of the defendants touching their exclusive use of it, but the danger attending domestic animals that are permitted by their owners to be theron; hence he was guilty of at least some degree of negligence, as well as the want of care and attention to the safety of his own property, in suffering his horses to stray away into a situation of extreme danger. But he was guilty of a culpable degree of negligence in permitting them, without care or pursuit, to stray away from his possession and be strolling wrongfully along on the track of the railroad, where trains of cars were almost constantly running with great speed, day and night; and where they might have been the cause of destroying not only the property, but the lives of others, who were lawfully pursuing their legitimate business. The injury to individuals and the destruction of human life, which has from time to time occurred in this country, in consequence of domestic animals being wrongfully on the track of railroads, is appalling, and justly exciting much alarm in the public mind.

The defendants, in running the cars, were pursuing merely their lawful and legitimate business, and were clearly within the powers and privileges granted by the express terms of their charter. If the injury complained of had occurred in

consequence of any negligence or fault on the part of the defendants, or the engineer conducting the train, without any negligence or fault on the part of the plaintiff, the defendants most unquestionably would have been liable for the damages sustained by the plaintiff; but such is not the case presented. This suit is an action on the case, sounding in tort. The wrongful injury alledged, constitutes the foundation of the plaintiff's right of action; and yet the facts submitted for the purpose of sustaining it, shows not the least degree of negligence of want of care or skill on the part of the defendants, or the engineer conducting the train; and the ground upon which the action was brought, or upon which it was expected that it could be maintained, cannot be perceived, for the case submitted neither shows *a malfeasance, a misfeasance, or a nonfeasance.* It often happens that no precaution, care, or skill, can prevent a locomotive at the head of a train of cars running at their accustomed speed, from coming into collision with some domestic animal wrongfully on the road, and which the owner has negligently suffered to go at large unrestrained; the engineer conducting the train, not being able in consequence of some curve in the road, the darkness of the night, or some other unavoidable cause, to discover the animal in time to stop the locomotive, and thus prevent the collision. Under such circumstances, the defendants could not be held liable by any known principle of law, and if they could be, it would be unreasonable and manifestly unjust. They are required under heavy penalties to run the cars, and expeditiously transport persons and property, &c.; and shall they, by construction based upon nothing better than mere hypothesis, be compelled to assume the guardianship of all the stray cattle, horses, and swine, usually found strolling along on the track of their railroad? Most certainly not. The owners are the only persons to look after them, and if they do not, it is but just that they alone should suffer the consequences of their own negligence and wrongful act—of their own want of care, in the protection and preservation of their own property.

The opinion of this Court is, that the plaintiff is not entitled to recover on the case submitted.

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LIBEL—SUPPLYING SHIP WITH STORES, ETC.

In the United States District Court—in admiralty—before Judge Betts, October 10, 1851. William H. Meritt & Co., *vs.* J. N. M. Brewer.

The libelants supplied a ship belonging to the State of Maine, and owned by the respondent, with ship stores, &c., in this port, at various times, between July, 1849, and August, 1850, on the orders of her master. In June, 1850, the respondent paid the indebtedness then accrued for such supplies, to the amount of $409 30, and interest. The ship then being in this port, and fitting for a voyage to the East Indies under the same master; the libelants, on the like order, furnished her stores and supplies for the voyage, and alledge, also, that they shipped cargo on board. The master died at Manilla before the voyage was completed. The libelants proved, by the admission of the master who succeeded him, that a portion of the libelants' cargo was appropriated at Manilla to the necessities of the ship.

They also proved, that, in addition to ship stores and other supplies, furnished the ship in New York, they advanced to the master various sums in cash, whilst she was here fitting out, and also paid the premium for her insurance. Held, that the master had competent authority in law to charge the ship or owner for such supplies, and that it was not necessary for the libelants to prove they were absolutely necessary for the ship, nor that they were actually placed on board. If they were such as were appropriate for the voyage, and were delivered pursuant to the order of the master, or in the usual mode of business, the owner was chargeable for them. It was also declared that independent of such liability by paying the former credit given to the master and ship, the respondent gave an implied authority to the master to contract the subsequent debt of the same character. Held, that the declarations of the new master were incompetent evidence to charge the defendant, on the claim of libelants for cargo shipped on board.

they should proceed upon the bill of lading. Held also, that advances of cash to the master created no lien on the vessel, and no liability on the owner, unless appropriated to her necessities, which the creditors must prove, as also an authority from the owner to make the advance for insurance. A reference ordered to take the account upon the basis of this decision.

# COMMERCIAL CHRONICLE AND REVIEW.

THE PROSPECTS AT THE OPENING OF THE MONTH—FAILURE OF SEVERAL BANKS—SUCCEEDING PANIC AND FAILURES—SUSPENSION OF WEALTHY HOUSES TO AVOID SACRIFICES—PRINCIPLES INVOLVED IN SUCH SUSPENSIONS FULLY DISCUSSED—SACREDNESS OF COMMERCIAL OBLIGATIONS VINDICATED—CONFIDENCE IN A MEASURE RESTORED—DECLINE IN THE SHIPMENT OF SPECIE—SUPPLY OF FOREIGN EXCHANGE—MARKET FOR OUR BREADSTUFFS—CROP OF WHEAT AND RYE—POSITION OF THE COTTON STAPLE—PRESSURE OF MONEY MATTERS STILL FELT IN THE INTERIOR—CONTRACTION OF THE BANK ACCOMMODATIONS NOT AS GREAT AS REPRESENTED—COMPARATIVE SUMMARY OF THE CONDITION OF THE NEW YORK CITY BANKS, AND OF THE BANKS OF NEW ORLEANS—TOTAL COINAGE OF GOLD, SILVER, AND COPPER AT ALL THE MINTS, SINCE THEIR ORGANIZATION—TOTAL DEPOSITS OF DOMESTIC GOLD AT THE MINTS FOR THE SAME TIME—TOTAL PRODUCTION OF CALIFORNIA GOLD SINCE ITS DISCOVERY—IMPORTS AT NEW YORK FOR SEPTEMBER—INCREASED RECEIPTS OF DUTIABLE GOODS—IMPORTS FOR NINE MONTHS—IMPORTS OF DRY GOODS AT NEW YORK FOR SEPTEMBER—IMPORTS OF DRY GOODS FOR NINE MONTHS—IMPORTS ENTERED WAREHOUSE, AND TOTAL RECEIPTS OF CASH DUTIES FOR NINE MONTHS—EXPORTS AT NEW YORK FOR SEPTEMBER—EXPORTS AT NEW YORK FOR NINE MONTHS.

THE commercial horizon, which was clouded at the date of our last, grew blacker and more foreboding for awhile, and then cleared, leaving us little more than the memory of our fears. The Peoples' Bank of Patterson and the Commercial Bank of Perth Amboy, in New Jersey, both failed, sounding the first note of alarm. Their failure was followed by the stoppage of the James' Bank, the Bank of New Rochelle, the Farmers' Bank at Mina, and the Western Bank at White Creek; all Associated Banks in the State of New York. The Bank of Salisbury, Maryland, which had dragged through a fitful existence of several years, also suddenly collapsed. For a few days the panic seemed universal, and in all of the principal markets in the Northern States, confidence was almost totally destroyed. The names of a few leading merchants would still command a loan of money at 18 per cent per annum, but second class borrowers had a sore time of it. A few insolvent firms at New York, Boston, Philadelphia, and Baltimore were obliged to stop and wind up their affairs; but as the failure of such houses is always a mere question of time, their bankruptcy created less alarm than sympathy. Here and there a firm whose assets had been injudiciously scattered, or whose business was too much extended, found it impossible to meet its maturing engagements, but, upon making a satisfactory exhibit of its affairs, was promptly relieved by its creditors and other friends, and carried safely over the breakers. But the darkest feature of the picture is yet to be mentioned. Several very wealthy men, whose assets greatly exceeded their liabilities, suspended payment, solely on account of the labor and sacrifice required to raise money. We think that all who have the public ear, and exert any influence upon public opinion, should unite in condemning this course, as tending to unsettle the very foundations of commercial credit. There is too little regard at this day for the sacredness of business obligations, and many make an acknowledgement or repudiation

of their debts, a mere matter of convenience. This indifference is hurtful enough when associated only with men of doubtful characters; its influence is doubly pernicious when found in men of high character and large means. A man of known wealth, and undoubted credit, loans his endorsements for a premium, and thus becomes bound for large sums of money, not as principal but as surety. Troublous times come on, and he is called upon to make good his bond. He is unwilling, however, to disburse the wealth he has acquired for his surety-ship, in providing the means to redeem his obligations, and he "suspends," until an easier money market shall enable him to meet the payments without any cost to himself. Apart from the pernicious example which he sets to men of weaker purses, and less exalted standing, he inflicts a great deal of direct positive injury upon the community. He cannot stop alone; he drags down with him houses which might otherwise have stood; but which once fallen, can never again, like the millionaire, regain their lost pedestal. He inflicts a blow upon public confidence, which the humblest man feels, and from the effects of which, many will never recover. A man who has given his promise, is bound to redeem it at any sacrifice of property, short of such a waste of his assets as will risk a loss to his other creditors. Suppose that it will take all of his property now to pay his debts, when, if he wait a little, he can pay them and have a surplus. What right has he to postpone the fulfillment of a sacred promise, in order to *save a surplus* for himself, when such a postponement will rob others of their little savings? Once admit the principle, that a man may repudiate or postpone his obligations for his own advantage, and commercial credit would be annihilated. Every debtor would find some convenient excuse for making his creditor wait for his pay.

As we intimated at the commencement, the excitement and panic created by these occurrences has chiefly passed away, and confidence is in a measure again restored. The high rates of interest current during the darkest hours, are less easily obtained, and only for second class commercial paper. The exports of specie to foreign countries are about over for the season. The receipts of cotton at the shipping ports have been somewhat retarded by the low stage of water in the Southern rivers, and this has diminished the expected amount of bills of exchange; but sufficient supplies have been realized to cut off nearly all the shipments of gold.

There has been a fair demand in Great Britain for our breadstuffs, and large amounts of wheat and flour have gone forward. The shipments of corn which had declined materially from last year, have again been larger, and have been latterly increased by the scarcity of good samples at the principal British markets. The failure of a portion of the rye crop, and the appearance of the potatoe disease in Central Europe, has created an export demand for rye, and considerable sales have been made for shipment, the first for some time. The crop of this grain, in this country, was not very large, although the quantity was good, and the kernel unusually heavy. The supply reaching the seaboard, is quite limited compared with the same season of last year. Wheat is now lower in our principal markets than it has been for several years, and the farmers part with it very reluctantly at the prices offered; the crop is large, and very good in average quality. Cotton is not likely to bear the high prices of last year, but the crop will be larger, and with a good demand, the value of the entire yield will not probably be largely diminished.

The pressure in the money market, which is now in a measure removed from the Atlantic cities, is still felt in the interior, and particularly in quarters where large sums have been due to the seaboard, and the low price of produce has prevented its rapid transmission. Much blame has been thrown upon the banks for contracting their accommodations at the late crisis, and a great portion of it has been entirely undeserved. We illustrated this fully in our last, and our remarks have been corroborated by recent bank returns. In New York the Controller has made his usual call upon the banks for their Quarterly Statements, and they have recently been transmitted. The accounts were made up to September 27th, which was about the lowest point of depression. The returns from the New York City Banks have already been compiled, (unofficially,) and we present a summary of the returns as compared with those of the preceding quarter:—

| | June 21st, 1851. | | | September 27th, 1851. | | |
|---|---|---|---|---|---|---|
| | Incorporated Banks. | Associated Banks. | Total. | Incorporated Banks. | Associated Banks. | Total. |
| Loans and discounts | $36,316,096 | $29,307,624 | $65,623,720 | $32,640,824 | $26,825,734 | $59,466,558 |
| Loans to Directors | 1,880,145 | 1,690,232 | 3,570,377 | 1,858,406 | 2,245,550 | 4,103,956 |
| Bonds and mortgages | 171,091 | 21,936 | 193,027 | 167,692 | 80,936 | 248,628 |
| Stocks | 365,685 | 4,068,702 | 4,434,387 | 405,589 | 4,238,355 | 4,643,944 |
| Specie | 5,782,818 | 2,203,136 | 7,985,954 | 4,116,336 | 1,924,150 | 6,040,486 |
| Capital | 16,251,200 | 16,841,893 | 33,093,093 | 16,251,200 | 18,351,900 | 34,603,100 |
| Circulation | 4,347,950 | 2,770,336 | 7,118,286 | 4,326,775 | 3,049,319 | 7,376,094 |
| Deposits | 23,854,068 | 17,284,698 | 41,138,757 | 20,648,609 | 16,073,217 | 36,721,826 |

The above shows a contraction of only $6,157,162 in general discounts, and an increase in loans to directors of $553,579; leaving a decline of but little more than the falling off in the deposits. The discounts have been further increased since the date of the above returns, and the specie in the banks is nearly one-third larger. The following are some particulars of the condition of the New Orleans banks on the same date (Sept. 27th) as compared with the previous dates noticed:—

| | Cash Liabilities. | | Cash Assets. | |
|---|---|---|---|---|
| | Circulation. | Total. | Specie. | Total. |
| *Specie paying*— | | | | |
| Louisiana Bank | $1,018,484 | $4,199,781 | $1,929,395 | $6,164,848 |
| Canal Bank | 882,300 | 1,980,583 | 530,701 | 3,350,259 |
| Louisiana State Bank | 1,031,950 | 3,537,243 | 1,256,249 | 3,802,146 |
| Mechanics' and Traders' Bank | 621,550 | 2,182,877 | 775,174 | 3,004,813 |
| Union Bank | 25,565 | 27,143 | 12,183 | 574,376 |
| *Non-specie paying*— | | | | |
| Citizens' Bank | 10,781 | 11,786 | 11,220 | 18,121 |
| Consolidated | 5,084 | 7,163 | 406 | 406 |
| Total, Sept. 27, 1851 | $3,595,714 | $11,946,577 | $4,515,328 | $16,914,979 |
| Total, August 30, 1851 | 4,968,670 | 12,234,193 | 5,000,886 | 16,197,221 |
| Total, August 1, 1851 | 3,306,883 | 13,080,741 | 5,335,093 | 16,861,993 |

As the cash assets in this list, beside specie, are made up almost wholly of accommodations to borrowers, i. e., of loans, and bills of exchange, we find that the banks at New Orleans have extended their business instead of contracting, so that there is little ground for complaint.

In the place of our usual monthly table of receipts and coinage at the Mint, we annex a complete history of the coinage of the precious metals from the organization of the Mint to the 1st of October; and also a summary of the total deposit of gold, both from California and all other sources within the United States. These have been compiled from official sources, and will be found very convenient for future reference.

## I. STATEMENT OF THE COINAGE AT THE MINTS OF THE UNITED STATES FROM THEIR ORGANIZATION TO SEPTEMBER 30, 1851.

| Periods. | PHILADELPHIA MINT. Gold. | Silver. | Copper. | Total. | NEW ORLEANS MINT. Gold. | Silver. | Total. | MINTS AT CHARLOTTE. Gold. | DAHLONEGA. Gold. | ALL THE MINTS. Total coinage. |
|---|---|---|---|---|---|---|---|---|---|---|
| | *Dollars.* | *Dollars.* | *Dollars.* | *Dollars.* | *Dollars.* | *Dollars.* | *Dollars.* | *Dollars.* | *Dollars.* | *Dollars.* |
| To the close of 1847..... | 52,741,350 00 | 62,748,211 90 | 1,145,591 21 | 116,635,153 11 | 15,189,365 | 8,418,700 | 23,608,065 | 1,656,060 00 | 3,218,017 50 | 145,117,295 61 |
| Year 1848..... | 2,780,930 00 | 420,050 00 | 64,157 99 | 3,265,137 99 | 358,500 | 1,620,000 | 1,978,500 | 364,330 00 | 271,752 50 | 5,879,720 49 |
| Year 1849..... | 7,948,332 00 | 922,950 00 | 41,984 32 | 8,913,266 32 | 454,000 | 1,192,000 | 1,646,000 | 361,299 00 | 244,130 50 | 11,164,695 82 |
| Year 1850..... | 27,756,445 50 | 409,600 00 | 44,467 50 | 28,210,513 00 | 3,619,000 | 1,456,500 | 5,075,500 | 347,791 00 | 258,502 00 | 33,892,306 00 |
| Nine months of 1851..... | 35,426,513 00 | 283,874 00 | 85,442 43 | 35,795,829 43 | 7,500,000 | 266,000 | 7,706,000 | 217,934 50 | 190,152 00 | 43,909,915 93 |
| Total..... | 126,653,570 50 | 64,784,685 90 | 1,381,643 45 | 192,809,899 85 | 27,120,865 | 12,893,200 | 40,014,065 | 2,947,414 50 | 4,182,554 50 | 230,963,933 85 |

NOTE.—The coinage at the Philadelphia Mint was commenced in 1793, at the other mints in 1838. The Dahlonega (Georgia) and Charlotte (North Carolina) Mints issue gold coins only; the New Orleans Mint gold and silver, and no copper.

## II. STATEMENT OF THE AMOUNT OF GOLD OF DOMESTIC PRODUCTION DEPOSITED AT THE MINTS TO SEPTEMBER 30, 1851.

| Periods. | PHILADELPHIA MINT. From California. | Other sources. | Total. | NEW ORLEANS MINT. From California. | Other sources. | Total. | CHARLOTTE MINT. From California. | Other sources. | Total. | DAHLONEGA MINT. From California. | Other sources. | Total. | AT ALL THE MINTS. From California. | Other sources. | Total. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | *Dollars.* | *Dollars.* | *Dollars.* | *Dollars.* | *Dollars.* | *Dollars.* | *Dolls.* | *Dollars.* | *Dollars.* | *Dollars.* | *Dollars.* | *Dollars.* | *Dollars.* | *Dollars.* | *Dollars.* |
| To the close of 1847..... | ..... | 7,797,141 | 7,797,141 | ..... | 119,699 | 119,699 | ..... | 1,673,718 | 1,673,718 | ..... | 3,218,017 | 2,218,017 | ..... | 12,808,575 | 12,808,575 |
| Year 1848..... | 44,177 | 197,367 | 241,544 | 1,124 | 11,469 | 12,593 | ..... | 370,785 | 370,785 | ..... | 271,753 | 271,753 | 45,301 | 851,374 | 896,675 |
| Year 1849..... | 5,481,439 | 285,653 | 5,767,092 | 669,921 | 7,268 | 677,189 | ..... | 390,732 | 390,732 | ..... | 244,131 | 244,131 | 6,151,360 | 927,784 | 7,079,144 |
| Year 1850..... | 31,667,505 | 122,801 | 31,790,306 | 4,575,567 | 4,454 | 4,580,021 | ..... | 320,289 | 320,289 | 30,025 | 217,673 | 247,698 | 36,273,097 | 665,217 | 36,938,314 |
| Nine months of 1851..... | 31,300,105 | 98,340 | 31,398,445 | 6,310,462 | 885 | 6,311,347 | 12,805 | 202,256 | 215,061 | 70,925 | 129,376 | 200,301 | 37,694,297 | 430,857 | 38,125,154 |
| Total..... | 68,493,226 | 8,501,302 | 76,994,528 | 11,557,074 | 143,775 | 11,700,849 | 12,805 | 2,957,780 | 2,970,585 | 100,950 | 4,080,950 | 4,181,900 | 80,164,055 | 15,683,807 | 95,847,862 |

In addition to the $80,000,000 of California gold which has been deposited in the Mint up to the 1st of October, as shown in the following table, we must add the large quantity stamped by private coiners, and now in circulation in California, the fifty-dollar pieces stamped by the U. S. Assayer at San Francisco, the large quantity consumed in manufactures, the shipments to England and other countries, the quantity still in the hands of miners and merchants in California, and a little over $5,000,000 received at the Atlantic ports since 1st October, which altogether, will make a total production of the Pacific gold region, since its discovery, equal to about one hundred and twenty or one hundred and thirty millions of dollars.

The imports thrown into the avenues of consumption during the month of September, show little variation from the corresponding month of last year. At New York, exclusive of specie, the amount thus received was $164,272 less than for September, 1850. Including the specie, which comprises $115,550 from foreign ports, and $2,654,176 from California, the total was $559,108 greater, as will be seen by the following comparison:—

IMPORTS THROWN UPON THE MARKET AT NEW YORK DURING THE MONTH OF SEPTEMBER.

| | Dutiable. | Free. | Specie. | Total. |
|---|---|---|---|---|
| 1851..... | $10,053,476 | $366,153 | $2,769,726 | $13,189,355 |
| 1850..... | 9,310,023 | 1,273,878 | 2,046,346 | 12,630,247 |
| 1849..... | 7,887,190 | 226,188 | 489,435 | 8,602,813 |
| 1848..... | 8,168,294 | 513,749 | 197,098 | 8,879,141 |
| 1847..... | 8,111,845 | 916,109 | 94,546 | 9,122,500 |
| 1846..... | 5,272,923 | 600,849 | 10,044 | 5,883,816 |

The item of specie includes only the imports entered upon manifest, and covers only about three-fourths of the actual receipts, which are shown by the deposits at the Philadelphia Mint to be about $4,000,000. It will be seen from the above comparison that there is an increase in *dutiable* goods and a decline in *free*, so that while the total of merchandise, thus entered, is less than for the same months of last year, the amount of duties has been greater, as will be seen by the following exhibit:—

| | Dutiable. | | Free. | | Total Merchandise. | | Cash Duties. |
|---|---|---|---|---|---|---|---|
| Sept. 1851.. | $10,053,476 | | $366,153 | | $10,419,629 | | $2,609,832 97 |
| 1850.. | 9,310,023 | | 1,273,878 | | 10,583,901 | | 2,495,242 77 |
| Increase.... | $743,453 | Dec. | $907,725 | Dec. | $164,272 | In.. | $114,590 20 |

This decline for the month has farther reduced our excess of imports for the year, as shown in our previous review, but still leaves the aggregate considerably larger than for the first three quarters of 1850, as will be seen by the following comparison:—

IMPORTS THROWN INTO THE CHANNELS OF CONSUMPTION AT NEW YORK FOR NINE MONTHS ENDING SEPTEMBER 30.

| | Free. 1850. | Free. 1851. | Dutiable. 1850. | Dutiable. 1851. |
|---|---|---|---|---|
| First quarter. ... | $2,464,445 | $3,128,216 | $27,320,278 | $35,793,788 |
| Second quarter... | 2,997,397 | 2,009,428 | 23,776,738 | 28,305,746 |
| Third quarter.... | 2,019,639 | 2,031,968 | 37,595,935 | 36,127,070 |
| Total..... | $7,481,481 | $7,169,612 | $88,692,951 | $100,226,604 |
| Add free goods..... | | | 7,481,481 | 7,169,612 |
| Total thrown on the market..... | | | $96,174,432 | $107,396,216 |
| | | | | 96,174,432 |
| Increase during nine months..... | | | | $11,221,784 |

Notwithstanding this aggregate increase, the imports for the quarter ending September 30, 1851, show a decrease, as compared with the same quarter of 1850, of $1,456,536. It is estimated that the imports for the remainder of the year will show a still greater decline.

The import of dry goods at New York during the month of September, show a decline in the total thrown upon the market, as compared with the previous year, of $142,913, the falling off being chiefly in silks. We present our usual monthly statement:—

IMPORTS OF DRY GOODS AT THE PORT NEW YORK FOR THE MONTH OF SEPTEMBER.

ENTERED FOR CONSUMPTION.

| | 1849. | 1850. | 1851. |
|---|---|---|---|
| Manufactures of wool | $1,330,783 | $1,380,248 | $1,293,205 |
| Manufactures of cotton | 548,516 | 546,523 | 600,073 |
| Manufactures of silk | 1,130,523 | 1,874,495 | 1,553,943 |
| Manufactures of flax | 443,266 | 483,040 | 477,742 |
| Miscellaneous dry goods | 209,243 | 342,998 | 331,601 |
| Total | $3,662,331 | $4,627,304 | $4,256,564 |

WITHDRAWN FROM WAREHOUSE.

| | 1849. | 1850. | 1851. |
|---|---|---|---|
| Manufactures of wool | $330,504 | $361,100 | $494,484 |
| Manufactures of cotton | 84,995 | 117,801 | 107,154 |
| Manufactures of silk | 113,577 | 126,316 | 245,100 |
| Manufactures of flax | 30,236 | 65,715 | 44,778 |
| Miscellaneous dry goods | 23,790 | 23,816 | 31,059 |
| Total | $583,102 | $694,748 | $922,575 |
| Add entered for consumption | 3,662,331 | 4,627,304 | 4,256,564 |
| Total thrown upon the market | $4,245,433 | $5,322,052 | $5,179,139 |

ENTERED FOR WAREHOUSING.

| | 1849. | 1850. | 1851. |
|---|---|---|---|
| Manufactures of wool | $147,561 | $232,783 | $277,963 |
| Manufactures of cotton | 25,851 | 116,729 | 159,998 |
| Manufactures of silk | 44,692 | 232,520 | 184,289 |
| Manufactures of flax | 82,901 | 56,833 | 137,148 |
| Miscellaneous dry gooods | 37,707 | 25,521 | 90,092 |
| Total | $338,712 | $664,386 | $849,490 |

We also annex a comparative statement of the imports of dry goods for the three quarters of the year, which shows little variation from the amount for 1850, although the total is largely in excess of the amount for the same period of 1849:—

IMPORTS OF DRY GOODS AT NEW YORK FOR NINE MONTHS, ENDING SEPTEMBER 30.

ENTERED FOR CONSUMPTION.

| | 1849. | 1850. | 1851. |
|---|---|---|---|
| Manufactures of wool | $8,570,456 | $13,527,083 | $11,965,958 |
| Manufactures of cotton | 7,483,986 | 9,020,422 | 8,448,367 |
| Manufactures of silk | 12,114,108 | 17,110,790 | 19,828,556 |
| Manufactures of flax | 3,468,656 | 6,270,651 | 5,161,925 |
| Miscellaneous | 2,655,203 | 2,112,874 | 2,087,479 |
| Total | $34,292,409 | $48,041,820 | $47,492,285 |

WITHDRAWN FROM WAREHOUSE.

| | 1849. | 1850. | 1851. |
|---|---|---|---|
| Manufactures of wool | $1,703,712 | $1,538,567 | $1,688,155 |
| Manufactures of cotton | 1,092,846 | 1,072,811 | 1,237,340 |
| Manufactures of silk | 1,174,623 | 962,064 | 1,225,715 |
| Manufactures of flax | 457,812 | 370,711 | 507,477 |
| Miscellaneous | 316,376 | 120,851 | 311,647 |
| Total | $4,745,369 | $4,065,004 | $4,970,334 |
| Add entered for consumption | 34,292,409 | 48,041,820 | 47,492,285 |
| Total thrown upon the market | $39,037,778 | $52,106,824 | $52,462,619 |

ENTERED FOR WAREHOUSING.

| | 1849. | 1850. | 1851. |
|---|---|---|---|
| Manufactures of wool | $1,164,580 | $1,903,973 | $1,939,209 |
| Manufactures of cotton | 1,069,140 | 1,654,493 | 1,342,205 |
| Manufactures of silk | 1,169,933 | 1,208,605 | 1,794,381 |
| Manufactures of flax | 388,132 | 600,197 | 620,107 |
| Miscellaneous | 249,648 | 100,410 | 358,675 |
| Total | $4,041,433 | $5,467,678 | $6,054,577 |

As there has been no important change from last year, in the imports of dry goods, it follows that the excess on general imports, amounting to $11,221,784, as shown above, must have been in other articles, and chiefly in dutiable goods, as the receipts of cash duties show an increase fully corresponding. The following is a comparison of the amount of duties, and also of the total imports entered warehouse since the first of January :—

| Years. | Entered Warehouse in September. | Entered Warehouse for nine months. | Cash duties for nine months. |
|---|---|---|---|
| 1850 | $864,916 | $11,709,917 | $26,012,720 54 |
| 1851 | 928,125 | 12,587,769 | 23,220,234 42 |
| Decrease | | $877,852 | In'e. $2,792,486 12 |

The exports from New York for the month of September show a very decided falling of in domestic produce from the same period of last year, as will be seen by the following comparison :—

EXPORTS AT NEW YORK FOR SEPTEMBER.

| Years. | Domestic produce. | Foreign. | Specie. | Total. |
|---|---|---|---|---|
| 1851 | $2,593,986 | $450,318 | $3,490,142 | $6,534,446 |
| 1850 | 4,284,574 | 724,385 | 1,033,918 | 6,602,877 |
| 1849 | 1,808,500 | 446,895 | 326,384 | 2,581,799 |
| 1848 | 2,926,213 | 217,266 | 561,445 | 3,704,925 |
| 1847 | 2,672,452 | 193,375 | 350,925 | 3,216,075 |
| 1846 | 1,238,401 | 388,169 | 2,255 | 2,628,825 |

The total exports of domestic produce since January 1, is about the same amount as for the first three quarters of 1850, and the exports of specie show a large increase.

EXPORTS AT NEW YORK FOR NINE MONTHS, ENDING SEPTEMBER 30.

| Years. | Domestic produce. | Foreign produce. | Specie. | Total. |
|---|---|---|---|---|
| 1851 | $31,498,446 | $3,446,636 | $31,262,271 | $66,207,353 |
| 1850 | 31,713,100 | 4,258,049 | 6,447,466 | 42,978,615 |
| Increase | | | | $23,228,738 |

# COMMERCIAL STATISTICS.

## STATISTICS OF THE TRADE AND COMMERCE OF NEW ORLEANS.

In the first part of the present number of this Magazine, under our series of papers entitled "Commercial Cities and Towns of the United States," we have given the annual report of the Trade and Commerce of New Orleans for the year ending August, 1851, as originally prepared for the *Price Current* of that city. The subjoined statistics of imports, exports, arrivals and clearances of shipping, and prices of produce and merchandise, &c., are derived from the same authentic and reliable source. The reports and statistics together furnish a well digested and comparative account of the trade of New Orleans, for the past and present year:—

A TABLE SHOWING THE RECEIPTS OF THE PRINCIPAL ARTICLES FROM THE INTERIOR, DURING THE YEAR ENDING 31ST AUGUST, 1851, WITH THEIR ESTIMATED AVERAGE AND TOTAL VALUE.

| Articles. | Amount. | Average. | Value. |
|---|---|---|---|
| Apples.....barrels | 54,808 | $3 00 | $174,424 |
| Bacon, assorted.....hhds. & casks | 48,602 | 60 00 | 2,916,120 |
| Bacon, assorted.....boxes | 9,274 | 30 00 | 278,220 |
| Bacon Hams.....hhds & trcs. | 44,478 | 60 00 | 2,668,680 |
| Bacon, in bulk.....pounds | 235,000 | 7 | 16,450 |
| Bagging.....pieces | 72,304 | 12 50 | 903,800 |
| Bale Rope.....coils | 107,224 | 7 50 | 804,180 |
| Beans.....barrels | 4,236 | 5 00 | 21,180 |
| Butter.....kegs & firkins | 54,967 | 5 00 | 274,835 |
| Butter.....barrels | 2,720 | 25 00 | 68,000 |
| Beeswax..... | 230 | 45 00 | 10,350 |
| Beef..... | 36,164 | 10 00 | 361,640 |
| Beef.....tierces | 11,902 | 15 00 | 178,800 |
| Beef, dried.....pounds | 15,300 | 7 | 1,071 |
| Buffalo Robes.....packs | 155 | 70 00 | 10,850 |
| Cotton.....bales | 995,036 | 49 00 | 48,756,764 |
| Corn Meal.....barrels | 3,662 | 3 00 | 10,986 |
| Corn, in ear..... | 42,526 | 90 | 38,273 |
| Corn, shelled.....sacks | 1,298,932 | 1 30 | 1,688,608 |
| Cheese.....boxes | 78,894 | 3 50 | 276,129 |
| Candles..... | 80,748 | 6 00 | 484,488 |
| Cider.....barrels | 245 | 3 00 | 735 |
| Coal, western..... | 700,000 | 50 | 350,000 |
| Dried apples and peaches..... | 6,853 | 3 00 | 20,559 |
| Feathers.....bags | 3,645 | 35 00 | 127,575 |
| Flax seed.....tierces | 204 | 12 00 | 2,448 |
| Flour.....barrels | 941,106 | 4 50 | 4,234,977 |
| Furs.....hhds, bundles and boxes | 1,289 | ..... | 800,000 |
| Hemp.....bales | 25,116 | 18 00 | 452,080 |
| Hides..... | 140,338 | 1 00 | 140,338 |
| Hay..... | 48,281 | 3 00 | 144,843 |
| Iron, pig.....tons | 152 | 25 00 | 3,800 |
| Lard.....barrels and tcs. | 115,570 | 24 00 | 2,773,680 |
| Lard.....kegs | 151,931 | 4 00 | 607,724 |
| Leather.....bundles | 8,490 | 25 00 | 212,250 |
| Lime, western.....barrels | 37,738 | 1 50 | 56,607 |
| Lead.....pigs | 325,505 | 3 20 | 1,041,616 |
| Lead, bar.....kegs and boxes | 629 | 20 00 | 12,580 |
| Lead, white.....kegs | 1,930 | 7 00 | 13,510 |
| Molasses, (estimated crop).....gallons | 10,500,000 | 25 | 2,625,000 |
| Oats.....barrels & sacks | 479,741 | 1 00 | 479,741 |

| Articles. | Amount. | Average. | Value. |
|---|---|---|---|
| Onions.....barrels | 14,279 | 2 00 | 28,558 |
| Oil, linseed..... | 178 | 35 00 | 6,230 |
| Oil, castor..... | 4,145 | 50 00 | 207,250 |
| Oil, lard..... | 17,157 | 26 00 | 446,082 |
| Potatoes..... | 162,922 | 2 00 | 325,844 |
| Pork.....tcs & barrels | 286,084 | 12 00 | 3,433,008 |
| Pork.....boxes | 1,980 | 25 00 | 49,500 |
| Pork.....hhds | 1,231 | 60 00 | 73,860 |
| Pork, in bulk.....pounds | 10,513,895 | 5½ | 578,264 |
| Porter and Ale.....barrels | 384 | 10 00 | 3,840 |
| Packing Yarn.....reels | 4,190 | 7 00 | 29,330 |
| Skins, Deer.....packs | 1,119 | 25 00 | 27,975 |
| Skins, Bear..... | 7 | 15 00 | 105 |
| Shot.....kegs | 2,044 | 25 00 | 51,100 |
| Soap.....boxes | 9,484 | 3 00 | 28,452 |
| Staves.....M. | 9,000 | 35 00 | 315,000 |
| Sugar, (estimated crop).....hhds | 211,303 | 60 00 | 12,678,180 |
| Spanish Moss.....bales | 5,974 | 6 00 | 35,844 |
| Tallow.....barrels | 6,164 | 24 00 | 147,936 |
| Tobacco, Leaf.....hhds | 52,830 | 120 00 | 6,327,600 |
| Tobacco Strips..... | 9,100 | 150 00 | 1,365,000 |
| Tobacco, Stems..... | 2,200 | 20 00 | 44,000 |
| Tobacco, chewing.....kegs & boxes | 4,115 | 30 00 | 123,450 |
| Twine.....bundles & boxes | 3,156 | 10 00 | 31,560 |
| Vinegar.....barrels | 89 | 6 00 | 534 |
| Whisky..... | 157,741 | 8 00 | 1,261,928 |
| Window Glass.....boxes | 16,428 | 5 00 | 82,140 |
| Wheat.....barrels & sacks | 88,797 | 2 00 | 177,594 |
| Other various articles—estimated at..... | | | 5,000,000 |
| Total value..... | | | $106,924,083 |
| Total in 1849–50..... | | | 96,897,873 |
| Total in 1848–49..... | | | 81,989,692 |
| Total in 1847–48..... | | | 79,779,151 |

EXPORTS OF COTTON FROM NEW ORLEANS FOR TWO YEARS, COMMENCING 1ST SEPTEMBER AND ENDING 31ST AUGUST.

| Whither exported. | 1850-51. Bales. | 1849-50. Bales. |
|---|---|---|
| Liverpool..... | 562,277 | 378,155 |
| London..... | ..... | 1,367 |
| Glasgow & Greenock... | 15,418 | 10,857 |
| Cowes, Falmouth, &c... | 4,678 | 3,741 |
| Cork, Belfast, &c..... | ..... | 3,069 |
| Havre..... | 125,067 | 112,159 |
| Bordeaux..... | 1,164 | 1,006 |
| Marseilles..... | 4,131 | 3,618 |
| Nantz, Cette & Rouen.. | ..... | 630 |
| Amsterdam..... | 489 | ..... |
| Rotterdam and Ghent.. | 1,468 | 572 |
| Bremen..... | 12,905 | 1,801 |
| Antwerp, &c..... | 10,366 | 11,994 |
| Hamburg..... | 3,235 | 112 |
| Gottenburg..... | 8,180 | 5,021 |
| Spain and Gibraltar.... | 41,018 | 46,296 |
| Havana, Mexico, &c.... | 565 | 2,292 |
| Genoa, Trieste, &c..... | 42,537 | 36,362 |
| China..... | ..... | ..... |
| Other foreign ports.... | 11,143 | 6,496 |
| New York..... | 52,398 | 84,891 |
| Boston..... | 82,540 | 109,089 |
| Providence, R. I..... | ..... | ..... |
| Philadelphia..... | 14,867 | 15,616 |
| Baltimore..... | 2,511 | 4,017 |
| Portsmouth..... | ..... | ..... |
| Other coastwise ports... | 1 | 230 |
| Western States..... | 500 | ..... |
| Total..... | 997,458 | 838,591 |

RECAPITULATION.

| | | |
|---|---|---|
| Great Britain..... | 582,373 | 397,189 |
| France..... | 130,362 | 117,413 |
| North of Europe..... | 47,786 | 25,196 |
| South of Europe & China | 84,120 | 84,950 |
| Coastwise..... | 152,817 | 213,843 |
| Total..... | 997,458 | 838,591 |

EXPORTS OF TOBACCO FROM NEW ORLEANS FOR LAST TWO YEARS, COMMENCING 1ST SEPTEMBER AND ENDING 31ST AUGUST.

| Whither exported. | 1850-51. Hhds. | 1849-50. Hhds. |
|---|---|---|
| Liverpool | 6,457 | 6,662 |
| London | 6,192 | 6,723 |
| Glasgow & Greenock | .... | .... |
| Cowes, Falmouth, &c. | 574 | 3,435 |
| Cork, Belfast, &c. | .... | .... |
| Havre | 659 | 718 |
| Bordeaux | 517 | 579 |
| Marseilles | 3,006 | 759 |
| Nantz, Cette & Rouen | .... | .... |
| Amsterdam | .... | .... |
| Rotterdam and Ghent | 712 | 824 |
| Bremen | 7,071 | 7,719 |
| Antwerp, &c. | 570 | 2,244 |
| Hamburg | 75 | 573 |
| Gottenburg | 941 | 1,365 |
| Spain and Gibraltar | 7,454 | 4,726 |
| Havana, Mexico, &c. | .... | .... |
| Genoa, Trieste, &c. | 5,613 | 5,874 |
| China | .... | .... |
| Other foreign ports | 816 | 1,375 |
| New York | 10,087 | 11,305 |
| Boston | 1,594 | 1,169 |
| Providence, R. I. | .... | .... |
| Philadelphia | 1,118 | 1,291 |
| Baltimore | 754 | 277 |
| Portsmouth | .... | .... |
| Other coastwise ports | 291 | 337 |
| Western States | .... | .... |
| Total | 54,501 | 57,955 |

RECAPITULATION.

| | | |
|---|---|---|
| Great Britain | 13,223 | 16,820 |
| France | 4,182 | 2,056 |
| North of Europe | 9,393 | 12,725 |
| South of Europe & China | 13,859 | 11,975 |
| Coastwise | 13,844 | 14,379 |
| Total | 54,501 | 57,955 |

EXPORTS OF SUGAR FROM NEW ORLEANS FOR TWO YEARS (UP THE RIVER EXCEPTED) FROM 1ST SEPTEMBER TO 31ST AUGUST.

| Whither exported. | 1850–51. Hhds. | 1850–51. Bbls. | 1849–50. Hhds. | 1849–50. Bbls. |
|---|---|---|---|---|
| New York | 13,595 | 655 | 42,523 | 2,229 |
| Philadelphia | 10,264 | 867 | 18,344 | 3,074 |
| Charleston, S. C. | 3,517 | 660 | 5,014 | 683 |
| Savannah | 1,702 | 89 | 1,981 | 300 |
| Providence and Bristol, R. I. | .... | .... | .... | .... |
| Boston | 733 | 27 | 3,929 | 961 |
| Baltimore | 6,670 | 237 | 8,101 | 2,225 |
| Norfolk, Richmond and Petersburg, Va. | 4,072 | 120 | 6,600 | 882 |
| Alexandria, D. C | 552 | .... | 649 | .... |
| Mobile | 3,840 | 2,266 | 2,876 | 1,526 |
| Apalachicola and Pensacola | 1,071 | 254 | 1,830 | 460 |
| Other ports | 1,131 | 3,469 | 873 | 1,602 |
| Total | 44,147 | 8,644 | 92,720 | 13,942 |

EXPORTS OF MOLASSES FROM NEW ORLEANS FOR TWO YEARS (UP THE RIVER EXCEPTED) FROM 1ST SEPTEMBER TO 31ST AUGUST.

| Whither exported. | 1850–51. Hhds. | 1850–51. Bbls. | 1849–50. Hhds. | 1849–50. Bbls. |
|---|---|---|---|---|
| New York | 509 | 22,646 | 2,078 | 42,776 |
| Philadelphia | ... | 7,735 | .... | 14,636 |
| Charleston, S. C. | 9 | 7,031 | .... | 10,531 |
| Savannah | ... | 2,981 | 82 | 4,279 |
| Providence and Bristol, R. I. | ... | .... | 247 | 37 |
| Boston | ... | 2,172 | .... | 2,792 |
| Baltimore | ... | 2,862 | .... | 13,432 |
| Norfolk, Richmond and Petersburg, Va. | .. | 2,312 | 30 | 6,134 |
| Alexandria, D. C | ... | 631 | .... | 600 |
| Mobile | ... | 10,398 | .... | 8,850 |
| Apalachicola and Pensacola | ... | 4,578 | .... | 5,370 |
| Other ports | 118 | 3,677 | 305 | 3,237 |
| Total | 636 | 67,024 | 2,742 | 112,674 |



COMPARATIVE PRICES OF SUGAR, MOLASSES, FLOUR, CORN AND PORK, ON THE FIRST OF

EXPORTS OF FLOUR, PORK, BACON, LARD, BEEF, LEAD, WHISKY AND CORN, FOR YEAR ENDED 31ST AUGUST, 1851.

| Ports. | Flour. bbls. | Pork. bbls. | Bacon. hhds. | Lard. kegs. | Beef. bbls. | Lead. pigs. | Whisky. bbls. | Corn. sacks. |
|---|---|---|---|---|---|---|---|---|
| New York..... | 72,584 | 55,849 | 9,856 | 209,825 | 3,055 | 152,936 | 1,381 | 160,728 |
| Boston..... | 88,925 | 77,806 | 6,503 | 224,333 | 13,435 | 127,316 | 2,242 | 32,461 |
| Philadelphia..... | 418 | 5,538 | 2,763 | 41,045 | 421 | 38,544 | 268 | 9,477 |
| Baltimore..... | .... | 13,421 | 1,843 | 32,585 | 955 | ..... | 1,542 | .... |
| Charleston..... | 6,175 | 1,003 | 2,872 | 2,769 | 119 | ..... | 11,514 | 23,978 |
| Other coastw'e p'ts | 150,960 | 22,890 | 19,972 | 40,046 | 3,785 | 172 | 50,383 | 150,125 |
| Cuba ..... | 206 | 970 | 1,513 | 122,268 | 71 | .... | .... | 94,193 |
| Other foreign ports | 264,150 | 15,260 | 919 | 66,085 | 20,574 | 1,640 | 62 | 64,420 |
| Total..... | 583,418 | 192,737 | 46,241 | 738,956 | 42,415 | 320,608 | 67,392 | 535,382 |

In the above, the exports to Mobile, &c., via the Pontchartrain Railroad and New Canal, are included.

MONTHLY ARRIVAL OF SHIPS, BARKS, BRIGS, SCHOONERS AND STEAMBOATS, FOR TWO YEARS, FROM THE 1ST OF SEPTEMBER TO THE 31ST OF AUGUST.

| Months. | 1850–51. Ships .. | Barks... | Brigs... | Sch'ners | S. Ships | Total... | S. Boats. | 1849–50. Ships .. | Barks... | Brigs... | Sch'ners | S. Ships | Total... | S. Boats. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| September . | 31 | 22 | 12 | 54 | 17 | 136 | 175 | 27 | 21 | 10 | 29 | 12 | 99 | 109 |
| October.... | 49 | 17 | 18 | 32 | 15 | 131 | 152 | 96 | 26 | 22 | 29 | 15 | 188 | 184 |
| November.. | 77 | 34 | 40 | 66 | 13 | 230 | 259 | 108 | 43 | 41 | 52 | 14 | 258 | 243 |
| December.. | 61 | 39 | 43 | 64 | 12 | 219 | 408 | 60 | 52 | 48 | 54 | 9 | 223 | 334 |
| January.... | 68 | 48 | 29 | 67 | 15 | 227 | 336 | 78 | 56 | 46 | 83 | 13 | 276 | 352 |
| February... | 42 | 34 | 38 | 71 | 13 | 198 | 311 | 52 | 32 | 40 | 67 | 11 | 202 | 311 |
| March ..... | 88 | 32 | 34 | 90 | 17 | 261 | 326 | 66 | 42 | 44 | 79 | 13 | 244 | 318 |
| April..... | 54 | 21 | 27 | 79 | 17 | 198 | 272 | 76 | 31 | 45 | 82 | 11 | 245 | 238 |
| May..... | 50 | 29 | 31 | 53 | 24 | 187 | 243 | 22 | 20 | 23 | 57 | 13 | 135 | 239 |
| June..... | 43 | 21 | 16 | 50 | 18 | 148 | 159 | 38 | 12 | 19 | 51 | 10 | 130 | 171 |
| July..... | 34 | 13 | 17 | 47 | 17 | 128 | 152 | 10 | 14 | 17 | 40 | 13 | 94 | 152 |
| August .... | 18 | 10 | 10 | 31 | 12 | 81 | 125 | 21 | 14 | 7 | 43 | 13 | 98 | 133 |
| Total.... | 615 | 320 | 315 | 704 | 190 | 2,144 | 2,918 | 654 | 363 | 362 | 666 | 147 | 2,192 | 2,784 |

COMPARATIVE PRICES OF MIDDLING TO FAIR COTTON AT NEW ORLEANS, ON THE FIRST OF EACH MONTH DURING A PERIOD OF FIVE YEARS—TOGETHER WITH THE TOTAL RECEIPTS AT NEW ORLEANS, AND THE TOTAL CROPS OF THE UNITED STATES.

| | 1850–51. | 1849–50. | 1848–49. | 1847–48. | 1846–47. |
|---|---|---|---|---|---|
| | Cents. | Cents. | Cents. | Cents. | Cents. |
| September.... | 9 a 11 | 9⅛ a 11⅛ | 5⅛ a .. | 10⅝ a 12 | 7⅛ a 9 |
| October ..... | 12¾ a 13⅝ | 9¾ a 12 | 5¼ a 7 | 10 a 11 | 8¾ a 10 |
| November..... | 13⅛ a 14⅛ | 9⅞ a 11 | 5 a 6 | 7⅛ a 8⅛ | 9 a 10¼ |
| December .... | 13¼ a 14 | 10⅛ a 11¼ | 5⅛ a 6¼ | 6⅛ a 7⅝ | 9 a 10¼ |
| January..... | 12¾ a 14⅛ | 10¼ a 11⅛ | 5⅝ a 6¼ | 6⅛ a 7⅝ | 10 a 11¼ |
| February..... | 12¼ a 13⅞ | 11⅛ a 12⅝ | 6⅛ a 7⅛ | 6⅝ a 8 | 11⅛ a 13 |
| March..... | 10½ a 13 | 10¼ a 12¼ | 6⅛ a 7⅛ | 6⅛ a 7⅞ | 9⅛ a 11 |
| April..... | 10¼ a 12¾ | 10⅝ a 12 | 6⅛ a 7⅛ | 6¼ a 7⅝ | 10⅝ a 11⅝ |
| May..... | 9⅛ a 11¼ | 11⅝ a 13 | 6¼ a 7¾ | 5 a 6⅛ | 10⅝ a 12¼ |
| June..... | 8¾ a 11 | 11⅛ a 13¼ | 7 a 8¾ | 5⅛ a 7¼ | 9⅞ a 11⅝ |
| July..... | 8 a 10⅛ | 11¾ a 13⅛ | 7 a 8¾ | 5⅛ a 7¼ | 9⅛ a 10¾ |
| August..... | 7 a 9⅛ | 12¼ a 13⅛ | 9 a .. | 5⅝ a 7⅛ | 10¼ a 12 |
| | Bales. | Bales. | Bales. | Bales. | Bales. |
| Receipts at N. O.. | 1,053,633 | 797,387 | 1,100,636 | 1,188,733 | 707,324 |
| Crop of U. States | 2,350,587 | 2,096,706 | 2,700,000 | 2,350,000 | 1,800,000 |

COMPARATIVE PRICES OF SUGAR, MOLASSES, FLOUR, CORN AND PORK, ON THE FIRST OF EACH MONTH FOR THE YEAR ENDING AUGUST, 1851.

| | Sugar. Cents. | Molasses. Cents. | Flour. Dollars. | Corn. Cents. | Pork. Dollars. |
|---|---|---|---|---|---|
| September | 4½ a 6⅝ | 20 a 32 | 4⅝ a 5½ | 53 a 63 | 10½ a 10½ |
| October | 4½ a 6⅝ | 20 a 32 | 4 a 5½ | 50 a 60 | 10½ a 10⅝ |
| November | 5 a 6 | 25 a 25½ | 4½ a 5½ | 70 a 75 | 11½ a 12 |
| December | 3 a 5⅝ | 23½ a 24 | 4½ a 5½ | 70 a .. | 11⅝ a 11¼ |
| January | 3½ a 6½ | 18 a 24 | 4½ a 5 | 60 a 65 | 11⅛ a 12 |
| February | 3½ a 6½ | 23 a 27½ | 4½ a 5 | 60 a 68 | 12½ a 13 |
| March | 3½ a 6 | 22 a 30 | 4 a 4⅛ | 52 a 58 | 12½ a 13 |
| April | 3½ a 6 | 25 a 33 | 4 a 4⅞ | 50 a 58 | 13 a 13½ |
| May | 3 a 6½ | 25 a 32 | 4½ a 5 | 46 a 54 | 14 a 14¼ |
| June | 3⅝ a 6½ | 25 a 30 | 3⅝ a 4⅛ | 38 a 51 | 14½ a 14⅛ |
| July | 3⅝ a 6½ | 22 a 30 | 3½ a 4⅛ | 34 a 57 | 14 a 14⅝ |
| August | 4½ a 6½ | 20 a 28 | 4 a 5½ | 34 a 60 | 15 a 15½ |

COMPARATIVE ARRIVALS, EXPORTS, AND STOCKS OF COTTON AND TOBACCO AT NEW ORLEANS FOR TEN YEARS, FROM 1ST SEPTEMBER EACH YEAR TO 31ST AUGUST.

| | Cotton—bales. | | | Tobacco—hhds. | | |
|---|---|---|---|---|---|---|
| Years. | Arrivals. | Exports. | Stocks. | Arrivals. | Exports. | Stocks. |
| 1850–51 | 905,036 | 997,458 | 15,390 | 61,030 | 54,501 | 23,871 |
| 1849–50 | 837,723 | 838,591 | 16,612 | 60,304 | 57,955 | 14,842 |
| 1848–49 | 1,142,382 | 1,167,303 | 15,480 | 52,335 | 52,895 | 13,293 |
| 1847–48 | 1,213,805 | 1,201,897 | 37,401 | 55,881 | 60,364 | 14,854 |
| 1846–47 | 740,669 | 724,508 | 23,493 | 55,588 | 50,376 | 22,336 |
| 1845–46 | 1,053,633 | 1,054,857 | 6,332 | 72,896 | 62,045 | 17,924 |
| 1844–45 | 979,238 | 984,616 | 7,556 | 71,493 | 68,679 | 7,673 |
| 1843–44 | 910,854 | 895,375 | 12,934 | 82,435 | 82,359 | 4,859 |
| 1842–43 | 1,089,642 | 1,088,870 | 4,700 | 92,509 | 89,891 | 4,873 |
| 1841–42 | 740,155 | 749,267 | 4,428 | 67,555 | 68,058 | 2,255 |

For similar statements of exports, imports, arrivals and clearances, and prices of produce, &c., from 1831 to 1850, the reader is referred to the *Merchants' Magazine*, vol. ii., p. 349—vol. v., p. 471—vol. vii., p. 390—vol. ix., p. 568—vol. xi., p. 415—vol. xiii., p. 369—vol. xv., p. 404—vol. xvii., p. 412—vol. xix., p. 511—vol. xxi., p. 553—vol. xxiii., p. 536, &c.

## COMMERCE AND NAVIGATION OF NEW ORLEANS.

A STATEMENT OF THE TONNAGE ENTERED AND CLEARED AT NEW ORLEANS IN EACH QUARTER OF THE YEAR COMMENCING JULY 1, 1850, AND ENDING JUNE 30TH, 1851.

| | TONNAGE ENTERED. | | TONNAGE CLEARED. | |
|---|---|---|---|---|
| | No. of vessel. | Tonnage. | No. of vessels. | Tonnage. |
| *July to September*, 1850. | | | | |
| American from foreign ports | 61 | 16,176 94 | 109 | 44,549 63 |
| Foreign from foreign ports | 42 | 14,347 29 | 52 | 19,866 96 |
| Coastwise | 205 | 63,083 40 | 199 | 57,442 30 |
| Total | 308 | 93,607 62 | 306 | 121,858 94 |
| *October to December*, 1850. | | | | |
| American from foreign ports | 158 | 61,487 57 | 114 | 53,946 18 |
| Foreign from foreign ports | 106 | 40,827 33 | 66 | 20,937 40 |
| Coastwise | 303 | 124,585 02 | 275 | 76,789 20 |
| Total | 567 | 22,899 926 | 455 | 151,672 78 |
| *January to March*, 1851. | | | | |
| American from foreign ports | 178 | 64,104 41 | 188 | 85,747 51 |
| Foreign from foreign ports | 97 | 45,207 51 | 119 | 53,761 56 |
| Coastwise | 365 | 125,032 82 | 424 | 121,362 03 |
| Total | 640 | 234,344 79 | 731 | 260,871 15 |
| *April to June*, 1851. | | | | |
| American from foreign ports | 146 | 53,368 22 | 234 | 108,715 82 |
| Foreign from foreign ports | 88 | 36,617 58 | 88 | 34,383 15 |
| Coastwise | 305 | 123,189 65 | 329 | 97,579 68 |
| Total | 539 | 213,175 50 | 651 | 240,678 7 |

RECAPITULATION.

| | TONNAGE ENTERED. No. of vessels. | Tonnage. | TONNAGE CLEARED. No. of vessels. | Tonnage. |
|---|---|---|---|---|
| Total 3d quarter, 1850 | 308 | 93,607 68 | 360 | 121,858 94 |
| Total 4th quarter, 1850 | 567 | 226,899 92 | 455 | 151,672 78 |
| Total 1st quarter, 1851 | 640 | 234,344 79 | 731 | 260,871 15 |
| Total 2d quarter, 1851 | 539 | 213,175 50 | 651 | 240,678 72 |
| Grand total | 2,054 | 768,028 04 | 2,197 | 775,081 69 |
| Total to June, 1851 | | 768,028 04 | | 775,081 69 |
| The year previous | | 763,634 58 | | 773,783 19 |
| Difference | | 4,393 41 | | 1,298 50 |

The subjoined table shows the value of the exports from New Orleans during the same quarters of the year, 1850–51. Years ending as above:—

EXPORTS.—AMERICAN PRODUCE.

| | American Vessels to Foreign Countries. | Foreign Vessels to to Foreign Countries. | Coastwise. |
|---|---|---|---|
| 3d quarter, 1850 | $6,078,397 | $2,103,110 | $2,859,567 |
| 4th quarter, 1850 | 7,983,399 | 2,719,728 | 6,177,128 |
| 1st quarter, 1851 | 11,431,425 | 7,692,659 | 11,707,593 |
| 2d quarter, 1851 | 12,529,388 | 3,449,907 | 6,484,624 |
| Total | $38,022,609 | $15,965,404 | $27,228,912 |

FOREIGN PRODUCE EXPORTED FROM NEW ORLEANS.

| | American Vessels to Foreign Countries. | Foreign Vessels to Foreign Countries. |
|---|---|---|
| 3d quarter, 1850 | $55,192 | $14,616 |
| 4th quarter, 1850 | 158,316 | 18,255 |
| 1st quarter, 1851 | 91,313 | 13,140 |
| 2d quarter, 1851 | 83,445 | 11,674 |
| Total | $388,265 | $57,685 |
| | | 388,265 |
| Grand total of foreign produce exported | | $445,950 |

The total exports of American produce to foreign ports, it will be seen, amounts to $53,988,013—and the total to coastwise ports to $27,228,925—showing a grand total for the year, of $81,216,925. New Orleans is the largest exporting city in the United States, with the exception perhaps of San Francisco.

## COMMERCE BETWEEN BRAZIL AND THE UNITED STATES.

BRAZILIAN CONSULATE, NEW YORK, *October* 13, 1851.

To FREEMAN HUNT, Esq., *Editor of the Merchants' Magazine, etc.*:—

MY DEAR SIR:—Enclosed you will find a tabular statement of the imports and exports between Brazil and the United States, in the year 1850–51, (as furnished by the Brazilian Consulate to the Government,) showing the trade between the Province of Brazil and the United States. This statement gives some idea of the trade, as far at least as it is in my power to obtain the information. It may differ from the returns made to the Secretary of the Treasury; but you know that I cannot obtain all necessary information, as in some ports I have no vice-consuls, and all depends upon Custom-House reports. It is, however, probably very near the truth. By it you will perceive that the present has been a year of increased Commerce between the two countries.

I am, dear sir, your most ob't serv't,

LUIS H. F. D'AGUIAR.



## EXPORTS OF COTTON FROM MOBILE FROM 1841 TO 1851.

## COMMERCE BETWEEN BRAZIL AND THE UNITED STATES YEAR ENDING JUNE 30, 1851.

### EXPORTS FROM THE UNITED STATES TO THE PROVINCES OF BRAZIL.

| | Rio Janeiro. | Pernambuco. | Sm. Peter. | Bahia. | Para. | Maranham. | Ceara. | Total. |
|---|---|---|---|---|---|---|---|---|
| New York..... | $521,926 46 | $67,223 71 | $77,086 61 | $50,748 20 | $122,085 79 | $203,837 64 | ..... | $1,042,908 41 |
| Maryland..... | 594,221 98 | 106,670 91 | 63,886 12 | 27,094 65 | ..... | ..... | ..... | 791,873 66 |
| Pennsylvania..... | 122,261 69 | 254,749 40 | ..... | 70,785 51 | ..... | ..... | ..... | 447,796 60 |
| Massachusetts.... | 129,847 24 | 56,295 11 | 275,757 72 | 28,539 08 | 201,272 60 | 8,366 33 | 11,908 65 | 711,886 73 |
| Maine..... | 7,529 30 | ..... | ..... | ..... | ..... | ..... | ..... | 7,529 30 |
| Virgiaia..... | 367,079 03 | 138,887 62 | 69,718 25 | 76,374 01 | ..... | ..... | ..... | 652,058 91 |
| Louisiana..... | 100,271 79 | 10,083 90 | ..... | ..... | ..... | ..... | ..... | 110,355 69 |
| Total ..... | $1,843,137 49 | $633,910 65 | $486,448 70 | $253,541 45 | $323,258 39 | $212,203 97 | $11,908 65 | $3,764,409 30 |

### IMPORTS INTO THE UNITED STATES FROM THE PROVINCES OF BRAZIL.

| | Rio Janeiro. | Pernambuco. | Sm. Peter. | Bahia. | Para. | Maranham. | Ceara. | Total. |
|---|---|---|---|---|---|---|---|---|
| New York..... | $2,261,165 74 | $101,829 73 | $282,405 94 | $77,449 60 | $232,514 21 | $55,984 42 | ..... | $3,011,349 64 |
| Maryland..... | 2,585,586 75 | 41,119 50 | 134,400 07 | ..... | ..... | ..... | ..... | 2,761,106 32 |
| Pennsylvania..... | 434,468 24 | 222,618 21 | ..... | 54,282 16 | ..... | ..... | ..... | 711,368 61 |
| Massachusetts.... | 74,454 36 | 146,125 96 | 422,484 82 | 30,291 06 | 316,295 68 | ..... | ..... | 989,651 88 |
| South Carolina.... | 121,922 86 | ..... | ..... | ..... | ..... | ..... | ..... | 121,922 86 |
| Alabama..... | 26,713 81 | ..... | ..... | ..... | ..... | ..... | ..... | 26,713 81 |
| Georgia..... | 28,841 68 | ..... | ..... | ..... | ..... | ..... | ..... | 28,841 68 |
| Louisiana..... | 2,896,405 29 | ..... | ..... | ..... | ..... | ..... | ..... | 2,896,405 29 |
| Total ..... | $8,429,558 73 | $511,693 40 | $839,290 83 | $162,022 82 | $548,809 89 | $55,984 42 | ..... | $10,547,360 09 |



STAPLE IMPORTS INTO MOBILE.

COMPARATIVE IMPORTS OF THE FOLLOWING HOME STAPLE ARTICLES INTO THE PORT OF MOBILE,

## EXPORTS OF COTTON FROM MOBILE FROM 1841 TO 1851.

COMPARATIVE VIEW OF THE EXPORTS OF COTTON FROM MOBILE FOR THE LAST TEN YEARS —THAT IS, 1841 TO 1851—YEARS COMMENCING SEPT. 1, AND ENDING AUGUST 31.

| Ports. | 1850–51. | 1849–50. | 1848–49. | 1847–48. | 1846–47. |
|---|---|---|---|---|---|
| Great Britain..... | 250,118 | 162,189 | 290,836 | 228,329 | 131,156 |
| France ..... | 46,005 | 39,973 | 63,290 | 61,812 | 39,293 |
| Other foreign ports.... | 26,373 | 11,927 | 44,525 | 29,070 | 19,784 |
| Total foreign ..... | 322,496 | 214,089 | 398,651 | 319,211 | 190,233 |
| Total United States. | 96,029 | 111,452 | 140,993 | 120,350 | 116,674 |
| Grand total ..... | 418,525 | 325,541 | 539,612 | 439,561 | 306,907 |

| Ports. | 1845–46. | 1844–45. | 1843–44. | 1842–43. | 1841–42. |
|---|---|---|---|---|---|
| Great Britain..... | 206,772 | 269,037 | 204,242 | 385,029 | 185,414 |
| France ..... | 66,821 | 68,789 | 49,611 | 53,645 | 49,544 |
| Other foreign ports.... | 26,824 | 52,811 | 15,885 | 26,903 | 6,919 |
| Total foreign ..... | 300,417 | 390,637 | 269,738 | 365,557 | 241,877 |
| Total United States. | 115,164 | 130,601 | 195,714 | 113,668 | 77,161 |
| Grand total ..... | 415,581 | 521,238 | 465,452 | 479,245 | 319,038 |

The subjoined table, derived from the Mobile *Price Current*, shows the number of bales, pounds, and value of cotton exported from Mobile to foreign and northern ports in the United States, distinguishing the quantity in foreign and American vessels:—

EXPORTS OF COTTON FOR YEAR ENDING AUGUST 31ST, 1851.

| | Bales. | Weight. | Value. |
|---|---|---|---|
| Great Britain, in American vessels.... | 143,386 | 72,609,890 | $7,434,390 55 |
| Great Britain, in British vessels ..... | 105,022 | 58,811,132 | 6,901,713 11 |
| Great Britain, in Bremen vessels..... | 1,710 | 854,009 | 107,518 63 |
| Total to Great Britain..... | 250,118 | 131,275,031 | $14,443,622 29 |
| France, in American vessels..... | 44,959 | 22,416,752 | $2,829,896 77 |
| France, in French vessels..... | 1,046 | 518,966 | 68,111 23 |
| Total to France..... | 46,005 | 22,935,718 | $2,898,008 00 |
| Other foreign ports in American vessels | 10,773 | 5,492,135 | $567,206 98 |
| Ditto Spanish vessels.... ..... | 13,705 | 5,917,382 | 818,883 61 |
| Ditto Sardinian vessels..... | 1,244 | 648,714 | 83,194 48 |
| Ditto Hamburg vessels..... | 651 | 321,700 | 40,604 00 |
| Total to other foreign ports..... | 26,373 | 12,379,931 | $1,509,889 07 |

TO NORTHERN PORTS.

| | Bales. | Weight. | Value. |
|---|---|---|---|
| New York ..... | 27,851 | 13,400,829 | $1,472,926 37 |
| Boston..... | 32,630 | 14,917,943 | 1,375,024 41 |
| Providence ..... ..... | 5,997 | 2,997,249 | 364,753 42 |
| Philadelphia..... .. ..... | 2,751 | 1,331,375 | 134,833 92 |
| Baltimore..... | 2,077 | 908,769 | 83,987 64 |
| Gloucester, New Jersey..... | 250 | 124,973 | 15,625 00 |
| Total to Northern ports..... | 71,556 | 33,681,138 | $3,447,150 76 |
| Total exports to Sept. 1, 1851... | 394,052 | 200,271,818 | $22,298,670 12 |

## STAPLE IMPORTS INTO MOBILE.

COMPARATIVE IMPORTS OF THE FOLLOWING HOME STAPLE ARTICLES INTO THE PORT OF MOBILE, FOR THE LAST FIVE YEARS, COMMENCING SEPTEMBER 1, AND ENDING AUGUST 31, IN EACH YEAR.

| Articles. | 1850–51. | 1849–50. | 1848–49. | 1847–48. |
|---|---|---|---|---|
| Bagging | 30,402 | 24,901 | 29,200 | 27,275 |
| Bale Rope | 30,926 | 22,460 | 26,679 | 27,011 |
| Bacon | 16,637 | 9,269 | 6,482 | 11,392 |
| Coffee | 25,236 | 18,928 | 26,104 | 26,415 |
| Corn | 98,086 | 79,038 | 25,573 | 21,505 |
| Flour | 95,054 | 70,570 | 52,311 | 33,069 |
| Hay | 27,143 | 23,189 | 17,470 | 11,787 |
| Lard | 20,021 | 10,562 | 8,044 | 10,914 |
| Lime | 23,745 | 19,322 | 21,155 | 9,893 |
| Molasses | 23,673 | 18,042 | 10,647 | 15,245 |
| Oats | 29,121 | 12,429 | 15,290 | 13,160 |
| Potatoes | 16,248 | 20,243 | 19,041 | 29,059 |
| Pork | 23,949 | 8,016 | 5,282 | 11,595 |
| Rice | 1,832 | 1,387 | 1,169 | 1,227 |
| Salt | 128,700 | 154,183 | 131,273 | 70,710 |
| Sugar | 6,634 | 7,760 | 5,528 | 7,673 |
| Whisky | 23,868 | 21,440 | 17,895 | 21,345 |
| Candles | ..... | ..... | 4,922 | 5,446 |

## NEW YORK AUCTIONEERS' RETURNS.

AN ABSTRACT OF AUCTIONEERS' RETURNS FOR HALF YEAR ENDING JUNE 31ST, 1851.

| Firms. | Free goods. | Dutiable goods. | Total. | Duty. |
|---|---|---|---|---|
| Aust'n & Spic'r & D. Aust'n, jr | $560,408 85 | $253,725 47 | $814,134 32 | $1,908 78 |
| Wilmerdings & Mount | 522,250 81 | 1,540,402 81 | 2,062,653 62 | 10,094 49 |
| Haggerty, Draper & Jones | 8,216,995 34 | 860,799 17 | 9,077,794 51 | 4,813 55 |
| Fosters & Livingston | 155,550 71 | 1,095,049 11 | 1,250,599 82 | 8,245 80 |
| Warren, Moran & Co | 173,277 28 | 829,248 37 | 1,002,525 65 | 6,257 17 |
| Van Wyck & Kobbe | 81,530 54 | 388,402 95 | 469,933 49 | 2,917 34 |
| Corlies, Haydock & Co | 172,806 19 | 60,947 13 | 233,753 32 | 488 12 |
| John Rudderow & Co | 201,374 98 | 119,056 73 | 320,431 71 | 892 93 |
| Catterfield & Topping | 150,386 44 | 113,769 62 | 264,156 06 | 1,023 27 |
| Chesterman & Hoguet | 85,619 71 | 175,731 24 | 261,350 95 | 1,349 18 |
| Curtis & Carrington | 25,485 98 | 43,343 55 | 68,829 53 | 345 78 |
| Total | $10,345,686 83 | $5,480,476 15 | $15,826,162 98 | $38,336 41 |

The *Dry Goods Reporter* remarks on the above table, "although these are the returns of a class known as dry goods auctioneers, it does not necessarily follow that the whole of the amount rendered as sales are dry goods, as in those rendered by Messrs. Haggerty, Draper & Jones, are included $3,500,000 Erie Railroad bonds and other stocks, as well as all the goods sold from the Navy Yard by order of Government; and among the dutiable goods sold by the same gentlemen and Messrs. Wilmerdings & Mount, are large amounts of teas wools, &c., &c. Messrs. Corlies, Haydock & Co. also sell glass and earthenware. Messrs. Austens & Spicer and David Austen have, during the season, had one or two wool sales. The sales of the other eight, we believe, were strictly dry goods. It would be safe, we presume, to estimate the aggregate sales of dry goods for the period named in the abstract, at $7,500,000, divided into two parts foreign and one part domestic fabrics."

## THE MERCANTILE NAVY OF GREECE.

A new report has just been made on the condition of the mercantile navy of Greece, which states the number of vessels rated under 30 tons to be 2,554; and those above that rate to be 1,402, making in all 5,046 vessels, rating altogether 266,221 tons. In the year 1838 the number of vessels amounted to 3,269, and their capacity was 85,502 tons; thus in twelve years the mercantile navy of Greece has been augmented by 777 ships, and 177,719 tons weight. It employs 30,000 seamen.

# JOURNAL OF BANKING, CURRENCY, AND FINANCE.

## THE CITY BANK OF COLUMBUS, OHIO.

We cheerfully give place to the subjoined letter, from the Cashier of the "City Bank of Columbus," correcting an error in the Auditor's report of the Condition of the Banks in Ohio. The errors in that statement, it will be seen from the following letter, originated while the report was passing through the hands of the printer of the Auditor's report, and not with the printer of the *Merchants' Magazine.*

CITY BANK OF COLUMBUS, COLUMBUS, O., *October* 8, 1851.

FREEMAN HUNT, Esq., *Editor of the Merchants' Magazine* :—

SIR:—In the number of your Magazine for this month, just received, under the head of "Condition of the Banks of Ohio," on pages 467 and 469, you have copied from an incorrect report. It is particularly erroneous in regard to this bank.

Its resources and liabilities are placed opposite to the name of the *City Bank of Cincinnati*, while those of the latter follow the name of this bank, and the difference, in referring to the corrected statement, you will perceive, is very great. For instance, while the bills discounted of this bank are $528,185 82, by your statement they appear to be only $172,445 85; and while our State stocks deposited with the Treasurer of State are $215,830 98, the statement, as published, makes these only $152,000.

The error occurred, I believe, while the Auditor's report was passing through the hands of the printer. When furnished with copies from the Auditor's office, I pointed out this and other errors, and means were immediately taken to suppress the incorrect impressions. One of these, it appears, had found its way to you. I send you, herewith, a correct statement, as subsequently issued by the Auditor.

Will you have the goodness to make the necessary correction in your next number?

Were it not that matter appearing in your Journal acquires a permanent character, I would not trouble you with this request. I am, very respectfully,

THOMAS MOODIE, *Cashier.*

We compile, from an official copy of the corrected report of the Auditor, a statement of the condition of the City Bank of Columbus, on the 1st Monday in August, 1851, as follows:—

RESOURCES.

| | |
|---|---|
| Notes and bills discounted | $528,185 82 |
| Specie | 49,925 32 |
| Notes of other banks | 34,205 07 |
| Due from other banks and bankers | 52,379 44 |
| Eastern deposits | 41,436 81 |
| Checks and other cash items | 13,165 10 |
| Bonds deposited with State Treasurer | 215,830 98 |
| Real and personal estate | 19,261 00 |
| Other resources | 1,769 94 |
| Total resources | $956,486 48 |

LIABILITIES.

| | |
|---|---|
| Capital stock paid in | $148,080 00 |
| Circulation | 215,626 00 |
| Safety Fund stock | 215,830 00 |
| Due to banks and bankers | 78,303 04 |
| Due to individual depositors | 241,314 03 |
| Surplus contingent fund and undivided profits | 3,000 00 |
| Bills payable and time drafts | 33,500 00 |
| Discounts, interest, &c. | 9,217 97 |
| Dividends unpaid | 11,077 47 |
| Other liabilities | 536 99 |
| Total liabilities | $956,486 48 |

## UNITED STATES TREASURER'S STATEMENT FOR SEPTEMBER, 1851.

TREASURER'S STATEMENT, SHOWING THE AMOUNT AT HIS CREDIT IN THE TREASURY, WITH ASSISTANT TREASURERS AND DESIGNATED DEPOSITARIES, AND IN THE MINT AND BRANCHES, BY RETURNS RECEIVED TO MONDAY, SEPTEMBER 29, 1851, THE AMOUNT FOR WHICH DRAFTS HAVE BEEN ISSUED BUT WERE THEN UNPAID, AND THE AMOUNT THEN REMAINING SUBJECT TO DRAFT. SHOWING, ALSO, THE AMOUNT OF FUTURE TRANSFERS TO AND FROM DEPOSITARIES, AS ORDERED BY THE SECRETARY OF THE TREASURY.

| | Amount on deposit. | Drafts heretofore drawn but not yet paid, though payable. | Amount subj. to draft. |
|---|---|---|---|
| Treasury of United States, Washington... | $109,466 25 | $11,453 32 | $98,012 93 |
| Assistant Treasurer, Boston, Mass..... | 1,222,060 17 | 16,102 54 | 1,205,957 63 |
| Assistant Treasurer, New York, N. Y..... | 3,765,572 62 | 175,621 49 | 3,590,951 13 |
| Assistant Treasurer, Philadelphia, Pa..... | 1,216,994 60 | 11,838 88 | 1,205,155 72 |
| Assistant Treasurer, Charleston, S. C..... | 290,883 62 | 38,250 67 | 252,632 95 |
| Assistant Treasurer, New Orleans, La. ... | 1,377,850 42 | 482,110 14 | 895,740 28 |
| Assistant Treasurer, St. Louis, Mo..... | 267,085 09 | 84,785 03 | 182,300 06 |
| Depository at Buffalo, New York..... | 39,569 95 | 2,843 35 | 36,726 60 |
| Depository at Baltimore, Maryland..... | 127,163 91 | 16,202 88 | 110,961 03 |
| Depository at Richmond, Virginia..... | 30,532 56 | 300 00 | 30,232 56 |
| Depository at Norfolk, Virginia..... | 8,761 25 | 293 19 | 8,468 06 |
| Depository at Wilmington, North Carolina. | 3,194 33 | 1,703 49 | 1,490 84 |
| Depository at Savannah, Georgia..... | 12,372 62 | 1,722 59 | 10,650 03 |
| Depository at Mobile, Alabama..... | 19,380 92 | 9,822 05 | 9,558 87 |
| Depository at Nashville, Tennessee ..... | 23,022 61 | 13,793 23 | 9,229 38 |
| Depository at Cincinnati, Ohio..... | 14,367 36 | 2,420 72 | 11,946 64 |
| Depository at Pittsburg, Pennsylvania.... | 2,464 09 | 383 34 | 2,125 75 |
| Depository at Cincinnati, (late)..... | 3,301 37 | ..... .. | 3,301 37 |
| Depository at Little Rock, Arkansas..... | 61,539 39 | 51,567 46 | 9,971 93 |
| Depository at Jeffersonville, Indiana..... | 29,051 49 | 3,667 60 | 25,383 89 |
| Depository at Chicago, Illinois..... | 20,189 03 | 1,464 06 | 18,724 97 |
| Depository at Detroit, Michigan ..... ... | 20,720 16 | 19,948 67 | 771 49 |
| Depository at Tallahassee, Florida..... | 16,504 68 | 1,331 70 | 15,172 98 |
| Suspense account.....$2,536 74 | ..... | 2,536 74 | ..... |
| Mint of the U. S., Philadelphia, Penn..... | 5,684,690 00 | ..... | 5,684,690 00 |
| Branch Mint of U. S., Charlotte, N. C..... | 32,000 00 | ..... | 32,000 00 |
| Branch Mint of U. S., Dahlonega, Ga..... | 26,850 00 | ..... | 26,850 00 |
| Branch Mint of U. S., New Orleans, La.... | 1,100,000 00 | ..... | 1,100,000 00 |
| Total..... | 15,526,588 49 | 950,118 14 | 14,579,007 09 |
| Deduct suspense account..... | | | 2,536 74 |
| | | | $14,576,470 35 |
| Add difference in transfers ..... | | | 1,170,000 00 |
| Net amount subject to draft..... | | | $15,746,470 35 |
| Transfers ordered to Treasury of the United States, Washington. | | | $600,000 00 |
| Transfers ordered to Assistant Treasurer, New Orleans, Louisiana. | | | 350,000 00 |
| Transfers ordered to Assistant Treasurer, St. Louis, Missouri..... | | | 25,000 00 |
| Transfers ordered to Depository at Norfolk, Virginia..... | | | 195,000 00 |
| | | | $1,170,000 00 |

## VALPARAISO CUSTOM-HOUSE RETURNS.

The *Valparaiso Neighbor* furnishes the subjoined statement of the Custom-House revenue returns during the last seven years:—

| | | | |
|---|---|---|---|
| 1844..... | $1,763,954 | 1848..... | $1,940,539 |
| 1845..... | 1,788,396 | 1849..... | 2,323,679 |
| 1846..... | 2,033,013 | 1850..... | 2,626,956 |
| 1847..... | 2,103,066 | | |
| | | Total..... | $14,579,603 |

## CONDITION OF THE BANKS OF NEW ORLEANS.

In the *Merchants' Magazine* for September, 1851, (vol. xxv., page 465,) we published a statement of the condition of the banks of New Orleans on the 26th of July, 1851. We now subjoin a similar statement of their condition on the 30th of August, 1851, as published by the Louisiana Board of Currency, under the signature of Charles Gayarre, Secretary of State, and George C. McWhorter, State Treasurer.

MOVEMENT OF THE BANKS.

| | CASH LIABILITIES. Circulation. | Total. | CASH ASSETS. Specie. | Total. |
|---|---|---|---|---|
| *Specie paying—* | | | | |
| Louisiana Bank | $1,065,089 | $4,219,259 | $1,992,766 | $5,913,836 |
| Canal Bank | 931,755 | 2,122,712 | 837,618 | 3,270,483 |
| Louisiana State Bank | 1,109,400 | 3,604,799 | 1,167,326 | 3,734,711 |
| Mechanics' & Traders' Bank | 818,845 | 2,238,868 | 986,964 | 2,903,613 |
| Union Bank | 25,535 | 27,452 | 9,733 | 361,200 |
| *Non-specie paying—* | | | | |
| Citizens' Bank | 10,781 | 11,786 | 4,159 | 11,059 |
| Consolidated | 7,234 | 9,314 | 2,318 | 2,318 |
| Total | $3,968,670 | $12,234,193 | $5,000,386 | $16,197,221 |

TOTAL MOVEMENT AND DEAD WEIGHT.

| | Liabilities exclusive of capital. | Assets. |
|---|---|---|
| *Specie paying—* | | |
| Louisiana Bank | $4,219,259 38 | $8,993,551 26 |
| Canal and Banking Co. | 2,122,712 64 | 6,356,298 15 |
| Louisiana State Bank | 3,604,799 88 | 5,917,682 99 |
| Mechanics' and Traders' Bank | 2,238,968 85 | 4,289,565 92 |
| Union Bank | 27,452 64 | 4,358,432 05 |
| *Non-Specie paying—* | | |
| Citizens' Bank | 6,595,941 31 | 5,942,697 35 |
| Consolidated Association | 1,566,747 15 | 1,217,029 78 |
| Total | $27,375,781 85 | $37,072,257 50 |

## REVENUE AND EXPENDITURES OF SPAIN.

The following statement, showing the income received from the first of January to the 31st of July, 1851, as well as the amount actually paid during the same time, speaks for itself:—

| | Received. *Reals.** | Paid out. *Reals.** |
|---|---|---|
| January | 61,910,076 30 | 115,213,748 22 |
| February | 108,931,565 14 | 116,232,183 9 |
| March | 97,948,374 7 | 108,984,034 11 |
| April | 68,152,009 10 | 102,181,335 1 |
| May | 121,582,976 1 | 119,091,347 25 |
| June | 98,750,924 31 | 91,853,983 7 |
| July | 71,340,179 23 | 132,298,729 27 |
| Total | 638,566,106 13 | 775,855,372 1 |

Which means that she has paid 147,289,265 22 reals beyond the amount received, and that it can only have been contrived by raising money on bills on the provinces, which if current monthly expenses are to be attended to, all know full well cannot be paid. Of course this deficiency will progress in the same proportion in the remaining five months of the year.

* Ten reals, according to Ecfeldt and Dubois' Manual of Gold and Silver Coin's of all nations, are valued in the United States at 51 cents 5 mills.

## CAPITAL AND DIVIDENDS OF BOSTON BANKS.

The following table shows the capital of the several banks in Boston, and the semi-annual dividends declared, and paid, on or after the 6th of October, 1851 :—

| Banks. | Capital. | Dividend. Per cent. | Amount. |
|---|---|---|---|
| Atlantic | $500,000 | 4 | $20,000 |
| Atlas | 500,000 | 3 | 15,000 |
| Boston | 900,000 | 4 | 36,000 |
| Boylston | 250,000 | 4½ | 11,250 |
| Bank of Commerce | 1,500,000 | 4 | 60,000 |
| City | 1,000,000 | 3½ | 35,000 |
| Columbian | 500,000 | 3½ | 17,500 |
| Cochituate | 150,000 | 4 | 6,000 |
| Eagle | 500,000 | 3½ | 17,500 |
| Exchange | 1,000,009 | 4 | 40,000 |
| Freemans | 250,000 | 4½ | 11,250 |
| * Faneuil Hall, (new) | ..... | none. | |
| Globe | 1,000,000 | 4 | 40,000 |
| Granite.....old | 500,000 | 3½ | 17,500 |
| Granite.....new | 150,000 | 1¾ | 2,625 |
| Grocers' | 300,000 | 4 | 12,000 |
| Hamilton | 500,000 | 4 | 20,000 |
| Market | 560,000 | 5 | 28,000 |
| Massachusetts | 800,000 | 3 | 24,000 |
| Mechanics, (S. B.) | 150,000 | 4 | 6,000 |
| Merchants | 3,000,000 | 4 | 120,000 |
| New England | 1,000,000 | 4 | 40,000 |
| North | 750,000 | 3½ | 26,250 |
| North America | 500,000 | 3½ | 17,500 |
| Shawmut | 500,000 | 4 | 20,000 |
| Shoe & Leather Dealers.....old | 750,000 | 4 | 30,000 |
| Shoe & Leather Dealers.....new | 250,000 | 1½ | 3,750 |
| State | 1,800,000 | 3½ | 63,000 |
| Suffolk | 1,000,000 | 5 | 50,000 |
| Tremont | 1,000,000 | 4 | 40,000 |
| † Traders.....old | 400,000 | 4 | 16,000 |
| Traders.....new | 200,000 | 2 45 | 4,900 |
| Union | 1,000,000 | 4 | 40,000 |
| Washington | 500,000 | 3 | 15,000 |
| Total | $23,660,000 | | $906,075 |
| Amount of capital last April | 21,760,000 | | 848,298 |
| Excess over April | $1,900,000 | | $57,777 |

The following banks have increased their capital since last April, as follows, viz :—

| | | | |
|---|---|---|---|
| Boylston Bank | $50,000 | Shoe & Leather Dealers | $250,000 |
| Bank of Commerce | 750,000 | Traders' Bank | 200,000 |
| Exchange Bank | 500,000 | | |
| Granite Bank | 150,000 | Increase | $1,900,000 |

As compared with former periods, the following table will show the increase of bank capital in Boston, and the amount of dividends :—

| | Capital. | Am't of divi'd. | | Capital. | Am't of divi'd. |
|---|---|---|---|---|---|
| 1847 | $18,030,000 | $1,269,300 | 1850 | $19,760,000 | $1,539,000 |
| 1848 | 18,330,000 | 1,373,000 | 1851, April | 21,760,000 | 848,298 |
| 1849 | 19,280,000 | 1,477,300 | 1851, Oct | 23,660,000 | 906,075 |

* The Fanuel Hall Bank went into operation September 1st, on ..... $250,000
Second assessment called for October 1st ..... 250,000

† After the payment of this dividend there will be no difference between the new and old stock.

## CONDITION OF THE BANKS OF SOUTH CAROLINA.

In the *Merchants' Magazine* for September, 1851, (vol. xxv., page 353,) we published a complete comparative view of the statements of such of the banks (including Bank and Branches of the State of South Carolina, Southwestern Railroad Bank, Planters' and Mechanics' Bank, Union Bank, State Bank of South Carolina, and Bank of South Carolina) as have accepted the provisions of the act of the Legislature of South Carolina of December 18, 1840, from their returns to the Controller General, for the 30th June, 1851. We now subjoin a summary of the condition of the same banks, on, or near, the 31st of August, 1851:—

DEBTS DUE BY THE SEVERAL BANKS.

| | |
|---|---|
| Capital stock | $5,991,885 73 |
| Bills in circulation | 3,562,844 12 |
| Net profits on hand | 570,147 32 |
| Balances due to banks in this State | 1,707,155 23 |
| Balances due to banks in other States | 213,739 41 |
| All other moneys due which bear interest | 16,000 00 |
| State Treasury, for balance, Current Fund | 239,016 08 |
| State Treasury, for balance, Sinking Fund | 672,567 00 |
| State Treasury, for loan for rebuilding the city | 1,760,335 90 |
| Cash deposited, and all other moneys due, exclusive of bills in circulation, profits on hand, balances due other banks, and money bearing interest | 1,792,205 80 |
| Total liabilities | $16,525,896 59 |

RESOURCES OF THE SEVERAL BANKS.

| | |
|---|---|
| Specie on hand | $1,108,689 42 |
| Real estate | 238,353 17 |
| Bills of other banks in this State | 398,982 85 |
| Bills of banks in other States | 9,870 11 |
| Balances due from banks in this State | 48,988 73 |
| Balances due from banks in other States | 261,920 36 |
| Notes discounted on personal security | 7,283,077 39 |
| Loans secured by pledge of its own stock | 224,218 20 |
| Loans secured by pledge of other stock | 783,780 31 |
| Domestic exchange | 1,250,740 73 |
| Foreign exchange | 210,503 50 |
| Bonds | 1,021,629 11 |
| Money invested in stock | 858,003 23 |
| Suspended debt and debt in suit | 455,059 70 |
| State Treasury | ..... |
| Branches and agencies | 1,429,799 64 |
| Bonds under law for rebuilding Charleston | 416,265 99 |
| Interest and expenses of State loan | 102,289 58 |
| Money invested in every other way than is specified in the foregoing particulars | 423,824 57 |
| Total resources of the banks | $16,525,896 59 |

## CANADA DECIMAL CURRENCY.

The Inspector-General of Canada has submitted to the Canadian Parliament, at Toronto, a series of resolutions for the adoption of the *decimal currency*, as now in use in the United States. He says:—

"It is desirable to adopt a currency for this Province, which might hereafter be advantageously made common to British America, as being simple and convenient in itself, and well adapted to facilitate our commercial intercourse with other parts of this continent; and that it is therefore expedient to adopt the decimal currency, on which the unit of account shall be a dollar, or five shillings currency, to be divided decimally into smaller denominations."

## LETTER FROM THE AUTHOR OF "FINANCIAL CRISES," ETC.

We shall very cheerfully comply with the request contained in the following note from M. Louis Chitti, late Professor of Political Economy in Brussels, by publishing, in an early number of the *Merchants' Magazine*, a translation of the criticism in the *Revue Britannique* of Mr. Chitti's work on "*Financial Crises, and Reform of the Monetary System*," published in 1839, together with some introductory remarks from the pen of that gentleman, on the means of replacing silver money, etc.

New York, *October* 28, 1851.

Freeman Hunt, Esq., *Editor of the Merchants' Magazine* :—

Dear Sir :—The panic that has unexpectedly just howled its frightful scream on the principal markets of the Union, induces me to address to you an article of the *Revue Britannique* concerning a work that I published in Brussels in 1839, on the "Financial Crises and Reform of the Monetary System."

Seeing the wise laws promulgated after the crisis of 1836–37 in the greater part of the United States, in order to prevent the excess of banking issues, which is the cause of crises, I think the actual panic, having no real motive, will cease very soon.

But for appreciating this opinion, it would, perhaps, be proper to publish, in your excellent and learned Commercial Review, the article of the *Revue Britannique*, in which are clearly and succinctly analyzed my doctrines of the financial crises and monetary system; which matters are, according to my opinion, intimately connected.

However, your enlightened sense will judge if the aforementioned article is deserving a record in your very important publication.

Accept, dear sir, the assurance of my perfect consideration.

LOUIS CHITTI.

## UNITED STATES TREASURY NOTES OUTSTANDING OCTOBER 1, 1851.

Treasury Department, Register's Office, *October* 1, 1851

| | |
|---|---|
| Amount outstanding of the several issues prior to 22d July, 1846, as per records of this office | $135,961 64 |
| Amount outstanding of the issue of 22d July, 1846, as per record of this office | 18,200 00 |
| Amount outstanding of the issue of the 28th January, 1847, as per records of this office | 11,850 00 |
| Total | 166,011 64 |
| Deduct cancelled notes in the hands of accounting officers, all under acts prior to 22d July, 1846 | 150 00 |
| Total | $165,861 64 |

## CONDITION OF THE BANKS OF NEW HAMPSHIRE IN 1851.

We give below a summary statement of the condition of the several banks of New Hampshire, on the first Monday of September 1851 :—

| | |
|---|---|
| Total number of banks | 25 |
| Amount of capital stock actually paid in | $2,571,584 77 |
| Amount of debts due the bank secured by pledge of its stock | 25,977 46 |
| Value of real estate belonging to the banks* | 50,321 66 |
| Amount of all debts due the banks† | 4,798,801 62 |
| Amount of all debts due from directors, either as principal or securities, specifying whether in interest or otherwise‡ | 66,112 65 |
| Amount of specie in the vaults | 136,703 76 |
| Amount of bills of other banks on hand | 30,434 16 |
| Amount of deposits in the banks | 547,881 09 |
| Amount of deposits in other banks for the redemption of its bills | 405,381 35 |
| Amount of the bills of the banks then in circulation | 3,127,479 00 |

* Including $10,000 in stocks.

† $5,015 33 as principal, $6,586 70 as surety.

‡ Exeter Manufacturing Company Stock.

## NEW COINAGE OF CHILI.

| Coins—There names and current values. | | Weight of each coin. Metrical Grammes. | Chili Granos. | U. S. Troy Grains. | Value in U. S. Currency. |
|---|---|---|---|---|---|
| Gold—Condor | $10 00 | 15 25 | 305 50 | 235 39 | $9.121521 |
| Doblon | 5 00 | 7 62 | 152 75 | 117 69 | 4.560760 |
| Escudo | 2 00 | 3 05 | 61 10 | 47 07 | 1.824304 |
| Silver—Dollar | 1 00 | 25 00 | 500 76 | 385 85 | 0.935394 |
| Half-dollar | 0 50 | 12 50 | 250 38 | 192 92 | 0.467697 |
| Peseta'f 20 centaras | 0 20 | 5 00 | 100 15 | 77 17 | 0.187078 |
| Decima | 0 10 | 2 50 | 50 07 | 38 58 | 0.093539 |
| Half-Decima | 0 05 | 1 25 | 25 03 | 19 29 | 0.046769 |
| Copper—Centara | 0 01 | 12 50 | 250 38 | 192 92 | 0.009275 |
| Half-Centara | 0 005 | 6 25 | 125 19 | 96 46 | 0.004637 |

The fineness of the metals used in the gold and silver coins is 900 milliemes or nine-tenths, as in the United States coins.

The proportion of gold to silver is as 1 to 16.39, and the proportion of silver to copper as 1 to 20.

In the United States the proportion of gold to silver is as 1 to 15.99, and of silver to copper as 1 to 19.8.

The old coins of Chili are identical in weight, fineness, and value with those of Spain. The new silver dollar is equivalent to the French five-franc piece, and the peseta of 20 centaras to the franc, &c.

## RATES OF EXCHANGE AT MOBILE FROM 1848 TO 1851.

COMPARATIVE RATES OF EXCHANGE ON LONDON, PARIS, AND NEW YORK, ON THE 1ST OF EACH MONTH FOR THREE YEARS PAST, (60 DAY BILLS.)

| | 1850–51. | | | 1849–50. | | | 1848–49. | | |
|---|---|---|---|---|---|---|---|---|---|
| | London. premium. | Paris. per dol. | N. York. dis. | Lon'n. premium. | Paris. per dol. | N. York. dis. | Lon'n. premium. | Paris. per dol. | N. Y'k. dis. |
| September | 8¾ | 5.37 | 1 | 8¾ | 5.30 | ¾ | 6¾ | .... | 1⅛ |
| October | 8¼ | 5.37 | 1⅛ | 9⅛ | 5.30 | ¾ | 6⅞ | 5.40 | 1⅞ |
| November | 8¼ | 5.37 | 2¼ | 8⅞ | 5.30 | 1¼ | 6⅞ | 5.35 | 1⅜ |
| December | 7¼ | 5 34½ | 2¼ | 7¼ | 5.35 | 1⅞ | 7¼ | 5.35 | 1⅞ |
| January | 7⅞ | 5.34½ | 2⅜ | 5⅝ | 5.50 | 2¼ | 7½ | 5.30 | 1⅝ |
| February | 7¼ | 5.35 | 3 | 6 | 5.50 | 1⅜ | 7⅜ | 5.35 | 1⅝ |
| March | 7⅞ | 5.32 | 2½ | 7¼ | 5.40 | 1⅜ | 5⅞ | 5.45 | 1⅞ |
| April | 9½ | 5.25 | 1⅛ | 7⅜ | 5.40 | 1¼ | 4½ | 5.40 | 2⅞ |
| May | 9⅜ | 5.22½ | 1⅛ | 9⅜ | 5.25 | ⅝ | 5⅜ | 5.35 | 1⅜ |
| June | 10 | 5.15 | ⅞ | 9½ | 5.25 | ⅝ | 7⅜ | 5.30 | 1 |
| July | 9½ | 5.20 | 1¼ | 9 | 5.35 | 1¼ | 8¼ | 5.30 | ⅝ |
| August | 9½ | 5.20 | 1¼ | 9 | 5.37 | 1 | 8¼ | 5.30 | ⅝ |

## RATES OF EXCHANGE AT NEW ORLEANS FROM 1848 TO 1851.

COMPARATIVE RATES OF EXCHANGE ON LONDON, PARIS, AND NEW YORK, ON THE 1ST OF EACH MONTH FOR THREE YEARS PAST, (60 DAY BILLS.)

| | 1850–51. | | | 1849–50. | | | 1848–49. | | |
|---|---|---|---|---|---|---|---|---|---|
| | London. premium. | Paris. per dol. | N. York. dis. | London. premium. | Paris. per dol. | N. York. dis. | London. premium. | Paris. per dol. | N. Y'k. dis. |
| September | 9⅜ | 5.28 | 1½ | 8½ | 5.25 | ½ | 8½ | 5.20 | 1½ |
| October | 9¼ | 5.28 | 1⅝ | 9⅜ | 5.30 | ¼ | 8 | 5.22 | 1⅜ |
| November | 7½ | 5.32 | 2⅜ | 9¼ | 5.28 | 1⅛ | 7¼ | 5.27 | 1½ |
| December | 8 | 5.30 | 1⅞ | 8 | 5 32 | 1⅜ | 9 | 5.27 | 1⅜ |
| January | 7⅜ | 5.28 | 2⅞ | 7½ | 5.35 | 1⅜ | 8 | 5.27 | 1⅜ |
| February | 7½ | 5.30 | 2⅞ | 7⅜ | 5.30 | 1⅜ | 7½ | 5.32 | 1⅜ |
| March | 7½ | 5.23 | 2⅝ | 7⅜ | 5.32 | 1½ | 5½ | 5.35 | 1⅜ |
| April | 10 | 5.10 | ⅜ | 7½ | 5.35 | 1⅜ | 4⅜ | 5.37 | 1⅜ |
| May | 10 | 5.12 | ⅜ | 9⅜ | 5.27 | ⅝ | 6½ | 5.35 | 1⅜ |
| June | 10½ | 5.10 | ½ | 9½ | 5.27 | ⅛ | 7⅜ | 5.30 | 1 |
| July | 10½ | 5.08 | 1⅝ | 9½ | 5.27 | 1½ | 8⅜ | 5.25 | ⅜ |
| August | 9½ | 5.10 | 1⅝ | 9⅜ | 5.29 | ⅞ | 8⅜ | 5.27 | ⅜ |

## PUBLIC DEBTS AND STANDING ARMIES OF EUROPEAN STATES.

[TRANSLATED FROM THE KALNER ZEITUNG.]

The paper money now in actual circulation in Europe represents a value of $1,261,428,520. The total of the public debt is by far larger; it amounts to $11,397,096,000. Great Britain (without the colonies) bears nearly one half of this gigantic burden, viz., $5,000,000,000. The British army numbers 129.000 men; the fleet is composed of 678 vessels, with 18,000 guns. The detail of the debts and armies of the other European States is as follows:—

SPAIN—Debt, 1,300,000,000 dollars; army, 160,000 men; fleet, 50 vessels, with 721 guns.

AUSTRIA—Debt, 1,100,000,000 dollars; fleet, 156 vessels (including gunboats,) with 600 guns.

RUSSIA AND POLAND—Debt, 733.000,000 dollars; army, 700,000 men; fleet, 175 vessels and 440 gun boats, with 7,000 guns.

THE NETHERLANDS—Debt, 731,000,000 dollars; army, 50,000 men; fleet, 125 vessels, with 2,500 guns.

PRUSSIA—Debt, 180,000,000 dollars; army, 121,000 men (war footing, 492,000 men;) fleet, 47 vessels and gunboats, with 114 guns.

FRANCE—Debt, 1,330,000,000 dollars; army, 265,463 men; fleet, 328 vessels, with 8,000 guns.

BELGIUM—Debt, 165,000,000 dollars; army, 90,000 men; fleet, 5 vessels, with 36 guns.

PORTUGAL—Debt, 160,000,000 dollars; army, 38,000 men; fleet, 36 vessels, with 700 guns.

PAPAL STATES—Debt, 120,000,000 dollars; army, 19,000 men; fleet, 5 vessels, with 24 guns.

SARDINIA—Debt, 120,000,000 dollars; army, 38,000 men; fleet, 60 vessels, with 900 guns.

NAPLES—Debt, 100,000,000 dollars; army, 48,000 men; fleet, 15 vessels, with 484 guns.

BAVARIA—Debt, 82.000,000 dollars; army, 57,000 men.

DENMARK—Debt, 80,000 dollars; army, 20,000 men; fleet, 38 vessels with 1,120 guns.

SAXONY—Debt, 43,500,000 dollars; army, 25,000 men.

TURKEY—Debt, 40,000,000 dollars; army, 220,000 men; fleet, 66 vessels, with 800 guns.

CITY OF HAMBURG—Debt, 34,000,000 dollars; army, 1,800 men.

GRAND DUCHY OF BADEN—Debt, 33.000,000 dollars; army, 18,000 men.

HANOVER—Debt, 30,368,000 dollars; army, 21,000 men.

WURTEMBURG—Debt, 28,000,000 dollars; army, 19,000 men.

GREECE—Debt, 25,000,000 dollars; army, 8,900 men; fleet, 34 vessels, with 131 guns.

GRAND DUCHY OF MECKLENBURG-SCHWERIN—Debt, 10,000,000 dollars; army, 4,700 men.

GRAND DUCHY OF TUSCANY—Debt, 10,000,000 dollars; army, 12,000 men; fleet, 10 vessels, with 15 guns.

CITY OF FRANKFORT—Debt, 7,000,000 dollars; army, 1,300 men.

DUCHY OF BRUNSWICK—Debt, 6,800,000 dollars; army 3.000 men.

GRAND DUCHY OF HESSE DARMSTADT—Debt, 6,200,000 dollars; army, 42,000 men.

ELECTORAL HESSE—Debt, 6,000,000 dollars; army, 11,000 men.

CITY OF LUBECK—Debt, 6,000,000 dollars; army, 490 men.

DUCHY OF SAXE-WEIMAR—Debt, 4,000.000 dollars; army, 2,000 men.

DUCHIES OF SCHLESWIG AND HOLSTEIN—Debt, 4,000,000 dollars; no army, no navy.

DUCHY OF ANHALT DESSAU AND KOETHEN—Debt, 3,500.000 dollars; army, 700 men.

CITY OF BREMEN—Debt, 3,000,000 dollars; army, 500 men.

DUCHY OF SAXE-COBURG GOTHA—Debt, 2,556,000,000 dollars; army, 1,200 men.

DUCHY OF SAXE-MEININGEN—Debt, 2,500,000 dollars; army, 2,400 men.

DUCHY OF NASSAU—Debt, 2,000.000 dollars; army, 3,500 men.

DUCHY OF PARMA—Debt, 1,800,000 dollars; army, 5,000 men.

DUCHY OF ANHALT-BERNBURG—Debt, 1,500,000 dollars; army 300 men.

DUCHY OF SAXE-ALTENBURG—Debt, 1,500,000 dollars; army, 1,000 men.

NORWAY—Debt, 1,500,000 dollars; army, 23.000 men; fleet, 160 vessels, with 560 guns.

GRAND DUCHY OF OLDENBURG—Debt, 1,200.000 dollars; army, 600 men.

LANDGRAVATE OF HESSE-HOMBURG—Debt, 860,000 dollars; army, 350 men.

PRINCIPALITY OF SCHWARZBURG-RUDOLSTADT—Debt, 252,000 dollars; army, 540 men.

Principality of Schwarzburg-Sondershausen—Debt, 60,000 dollars; army, 540 men.

Danubian Principalities—No debt; annual tribute to Turkey, 3,000,000 piastres; army, 6,800 men.

Servia—No debt; tribute, 2,000,000 paistres; army, 3,000 men.

Sweden—No debt; army 34,000 men; fleet, 340 vessels, with 2,400 guns.

Duchy of Modena—No debt; army 3,500 men.

Principality of Lippe-Detmole—No debt; army, 820 men.

Grand Duchy of Mecklenburg-Sterlitz—No debt; army, 800 men.

Principality of Reuss—No debt; army, 745 men.

Principality of Lippe-Schaumburg—No debt; army, 480 men.

Principality of Waldek—No debt; army, 520 men.

Principality of Lichtenstein—No debt; army 60 men.

Switzerland—No debt; army, 69,500 men, a small number of whom only is in actual service.

Republic of San Marino—No debt; no army.

## PUBLIC DEBT OF PENNSYLVANIA.

Statement showing the amount of public debt of Pennsylvania, at the close of each fiscal year, from 1844 to 1850, and as it stood on the first day of September, 1851, after deducting $659,122 08, cancelled by the Commissioners of the Sinking Fund, together with the amount of increase and reduction of said debt between the several years designated; also the aggregate amount of tax on real and personal estate, assessed for State purposes, for the years 1845 to 1850, both inclusive:—

| Date. | Amount of debt. | Increase. | Reduction. |
|---|---|---|---|
| December 1, 1844..... | $40,835,013 93 | ..... | ..... |
| December 1, 1845..... | 40,986,393 22 | $151,379 62 | ..... |
| December 1, 1846..... | 40,789,577 00 | ..... | $196,816 22 |
| December 1, 1847..... | 40,628,949 51 | ..... | 160,627 49 |
| December 1, 1848..... | 40,474,736 93 | ..... | 154,212 58 |
| | | | $511,656 29 |
| Deduct increase in 1845..... | | | 151,379 62 |
| Net reduction from December, 1844, to December, 1848..... | | | $360,276 67 |
| December 1, 1848..... | $40,474,736 93 | ..... | ..... |
| December 1, 1849..... | 40,511,173 92 | $36,436 99 | ..... |
| December 1, 1850..... | 40,775,485 42 | 264,311 50 | ..... |
| September 1, 1851..... | 40,116,258 39 | ——— | 659,227 03 |
| Deduct increase in 1849–50..... | | $300,748 49 | 300,748 49 |
| Net reduction from December, 1847. to September, 1851.... | | | $358,478 54 |

## THE BROKER IN THE CHAIR OF SATAN.

Two brokers, A and B, were traveling together, and, during the journey, traded in stocks; in which operation A shaved B enormously. One morning, after B had become conscious of his singeing, he told A he had had a remarkable vision during the night. "Indeed," says A, "what was it?" "Why," replied B, "I dreamed that I was dead, and was cast into the dominions of the Evil One. The Black Spirit considered my case, and assigned me a position in a very warm corner of his dominions. Others of our acquaintance and profession I saw present, and heard doomed to various degrees of suffering; the docket was nearly cleared, when an unusual bustle was manifested by the attending fiends, and upon looking up I saw one of them lead you in, and heard him announce your name to the cloven-footed chief, and relate a brief sketch of your character. The judge seemed puzzled what what to do with you:—he ordered the fiend in whose charge you were to repeat a portion of your history, when, after looking with an unsatisfied gaze into some of the deepest pits around him, Satan suddenly rose, and with an air of great deference said, 'Mr. A, YOU MAY TAKE MY CHAIR!'"—*Boston Post.*

## TAXATION AND FINANCE IN VIRGINIA.

The Convention which assembled in the city of Richmond, Va., on the second Monday in October, 1850, pursuant to law, "to consider, discuss and prepare a new constitution or alterations and amendments to the existing constitution," adjourned *sine die*, on the 1st of August 1851, after having agreed upon an amended bill of rights, constitution and schedule to be submitted to the people. The Lieutenant Governor, acting in the absence of the Governor, has issued a proclamation embracing a true copy of the constitution, &c., certified to the executives, as having been adopted by the said convention, and prepared by them for the ratification or rejection of the people.

As the sections under the title of "Taxation and Finance" will not be without interests to the financial readers of the *Merchants' Magazine*, we copy them entire.

### TAXATION AND FINANCE.

22. Taxation shall be equal and uniform throughout the Commonwealth, and all property, other than slaves, shall be taxed in proportion to its value, which shall be ascertained in such manner as may be prescribed by law.

23. Every slave who has attained the age of twelve years shall be assessed with a tax equal to and not exceeding that assessed on land of the value of three hundred dollars. Slaves under that age shall not be subject to taxation; and other taxable property may be exempted from taxation, by the vote of the majority of the whole number of members elected to each House of the General Assembly.

24. A capitation tax, equal to the tax assessed on land of the value of two hundred dollars, shall be levied on every white male inhabitant who has attained the age of twenty-one years; and one equal moiety of the capitation tax upon white persons shall be applied to the purposes of education in primary and free schools; but nothing herein contained shall prevent exemptions of taxable polls in cases of bodily infirmity.

25. The General Assembly may levy a tax on incomes, salaries and licenses; but no tax shall be levied on property from which any income so taxed is derived, or on the capital invested in the trade or business in respect to which the license so taxed is issued.

26. No money shall be drawn from the treasury but in pursuance of appropriations made by law; and a statement of the receipts, disbursement, appropriations and loans shall be published after the adjournment of each session of the General Assembly, with the acts and resolutions thereof.

27. On the passage of every act which imposes, continues or revives a tax, or creates a debt or charge, or makes, continues or revives any appropriation of public or trust money or property, or releases, discharges, or commutes any claim or demand of the State, the vote shall be determined by yeas and nays, and the names of the persons voting for and against the same shall be entered on the journals of the respective houses, and a majority of all the members elected to each house shall be necessary to give it the force of the law.

28. The liability to the State of any incorporated company or institution, to redeem the principal and pay the interest of any loan heretofore made, or which may hereafter be made by the State, to such company or institution, shall not be released; and the General Assembly shall not pledge the faith of the State, or bind in any form, for the debts or obligations of any company or corporation.

29. There shall be set apart annually, from the accruing revenues, a sum equal to seven per cent of the State debt existing on the first day of January in the year one thousand eight hundred and fifty-two. The fund thus set apart shall be called the Sinking fund, and shall be applied to the payment of the interest of the State debt, and the principal of such part as may be redeemable. If no part be redeemable, then the residue of the Sinking Fund, after the payment of such interest, shall be invested in the bonds or certificates of debt of this Commonwealth, or of the United States, or of some of the States of this Union, and applied to the payment of the State debt, as it shall become redeemable. Whenever, after the said first day of January, a debt shall be contracted by the Commonwealth, there shall be set apart in like manner, annually, for thirty-four years, a sum exceeding by one per cent the aggregate amount of the annual interest agreed to be paid thereon, at the time of its contraction, which sum shall be a part of the Sinking Fund, and shall be applied in the manner before directed. The General Assembly shall not otherwise appropriate any part of the Sinking Fund or its accruing interest, except in time of war, insurrection or invasion.

30. The General Assembly may at any time, direct a sale of the stocks held by the commonwealth in internal improvement and other companies; but the proceeds of such sale, if made before the payment of the public debt, shall constitute a part of the Sinking Fund and be applied in like manner.

31. The General Assembly shall not contract loans or cause to be issued certificates of debt or bonds of the State, irredeemable for a period greater than thirty-four years

## CERTIFIED BANK CHECKS.

The subject of "certified" checks that have been duly attested by the cashier of any bank and marked "good," and the liability of the banks to the holder afterwards for the amount of such certified checks, notwithstanding the subsequent inability of the drawers to meet them, having been one of much discussion in business circles, we append the following question by a subscriber to the Journal of Commerce as having a direct bearing on the question :—

"A dr ws a check on the City Bank to the order of B, and the bank certifies the check to be good. C buys the check, and remits it to a western city. About seven months have expired, and nothing has ever been heard of it, nor has it ever been presented to the bank for payment. A fails in business, in the meantime, owing the bank; and the bank, supposing the check to be lost, claims the right to place the amount of said check to the credit of A. Is the position of the bank correct?"

To which the Journal of Commerce, which may be considered good authority on the subject, makes the following reply :—

"When a bank certifies a check to be 'good,' the obligation to pay it is transferred from the drawer to the bank; and the latter is as much bound to pay it, whenever presented by a *bona fide* holder, as to pay one of its own notes. If the check is lost or mislaid, the amount may be recovered of the bank upon sufficient proof and surety, in the same manner as upon a lost bank-note.—If the original drawer of the check should, in its absence, claim the amount due him from the bank, proof of the certificate having been issued by the bank will be a sufficient bar to his recovery."

## PROGRESS OF TAXATION IN OHIO.

The Auditor and ex-auditor of Columbiana County, Ohio, have examined the annual reports of the State Auditor, from the year 1841 to the year 1850, both inclusive, and report the gross amount of taxes paid into the State Treasury, by all the counties of Ohio, in each of the undermentioned years, as follows :—

| | | | | | |
|---|---|---|---|---|---|
| 1841..... | $642,153 73 | 1845.... | $1,006,001 22 | 1848.... | $1,257,808 13 |
| 1842..... | 660,759 30 | 1846.... | 1,198,222 83 | 1849.... | 1,287,157 52 |
| 1843..... | 934,899 19 | 1847.... | 1,125,727 56 | 1850.... | 1,403,069 93 |
| 1844..... | 948,996 63 | | | | |

The annual report of the State Auditor, for the year 1851, will not be made until the next meeting of the Legislature, in December 1851; but the Auditor's estimate that the gross amount of taxes that will be paid by the State, the present year, into the Treasury at Columbus, will not vary materially from $1,600,000.

## THE CURRENCY OF HAMBURG.

The Commerce of Hamburg is conducted entirely by silver, without any economy whatever in its use as capital. They do, however, save the wear of the metal by depositing it in the vaults of a bank, and transferring it from one to another by means of written checks on the bank. The plan is this. The Bank of Hamburg is exclusively a bank of deposit. It receives silver into its vaults, crediting the accounts of the depositor with the amount he pays. The bank possesses no capital, and, therefore, the silver in the vaults of the bank is always exactly the amount of deposits. The depositors withdraw from or add to this amount of silver at pleasure. The Commerce of the town is then carried on by checks or orders, given by the buyer to the seller, which orders being paid into the bank, the amounts are transferred from the credit of one ac-

count to that of the other. The bank, therefore, neither discounts bills nor makes any advances whatever upon securities. Therefore, as the Bank of Hamburg has no means of making a profit by the use of any part of the bullion deposited with it, any more than the proprietors of the London docks have of using any part of the goods deposited with them, it becomes necessary that the depositors of the bank shall pay for this safety and convenience they derive in thus keeping their treasure. All the economy which the Hamburg people derive from banking, therefore, is, they save the wear to which the metal would be subjected if actually passed from hand to hand; but for this they pay certain charges to the bank. We do not know the exact amount of silver thus deposited with the Bank of Hamburg, but taking it on an average at £4,000,000 sterling, then that amount of capital is entirely withdrawn from all productive purposes, for the facilitating of exchanges.

## A FINANCIAL OPERATION.

We lately heard a story illustrative of the early days of York, says the York (Pa.) Gazette, those good old times, when everybody was "honest as the days are long." The parties were two early settlers in the western part of York (now Adams) county—both were of honest old German stock—and as one of them is still living we suppress the names. Peter, it appears, had increased the size of his farm, by annexing thereto a small track adjoining, and lacked about a hundred dollars of the sum necessary to pay for the new acquisition. He called upon his neighbor, George, to borrow the amount. George brought out an old bread basket, and counted down the desired number of "thalers,"—and then of course, the two sat down to two large earthen mugs of cider and as many pipes of tobacco. After smoking over the matter for a while, it occurred to Peter, that in similar transactions he had seen or heard of something like a note passing between the borrower and the lender, and he suggested as much to George. The lender assented to the propriety of the thing—paper, pen and ink were produced—and between the two a document was concocted, stating that George had loaned Peter one hundred dollars, which Peter would repay to George in "dree monts," (three months.) This Peter signed, and thus far our two financiers had made the thing all regular and ship-shape. But at this point a difficulty presented itself. They both knew that notes were made in the operation of borrowing and lending which they had witnessed; but neither of them had observed what disposition was made of the document—neither could tell whether it was *en regle* for the borrower or lender to take charge of the paper! Here was a dilemma! At length a bright idea struck George.

"You haf de money to pay, Peter—so be sure you must take dis paper, so you can see as you haf to pay it."

This was conclusive—the common sense of the thing was unanswerable—and Peter pocketed the money and his note, "so as he could see as he had to pay it." The three months passed over, and punctually to the day appeared our friend Peter, and paid over the promised sum to George. This being done, the mugs and pipes were again paraded. After puffing a while, Peter produced the note, and handed it to George with the remark:—

"Now you must take de note, so as you can see as de money haf been paid!"

## THE WALL STREET NOTE BROKERS.

This class of our citizens have assumed an importance in our community, that deserves more than a passing notice. They are fast taking the place of the banks, for whom many of them act as agents. Formerly they were known by the name of *shavers*, and were looked upon as almost out of the pale of *commercial* respectability. A change has come over the spirit of the feeling, and they are now looked upon in the same light as they are in Europe—as parties holding a position second only to the banks themselves; and persons now find it quite as easy to drop into the office of a respectable *bill broker*, and obtain the facilities he has been accustomed to ask hat in hand from a bank, without going through the degrading means they insist on. There are many *millions* under the control of these brokers, and as a body they are worthy of all trust. Some, though, cannot forget the *old leaven*, particularly found in the region of Jone's Court, who still merit the old-fashioned name of *shavers* from 3 to 10 per cent a month—men bringing the name of a broker into disrepute, which though they acquired wealth by the misery and ruin of their customers, still reek on, and cannot forget their origin. These *gentlemen* prove but an exception to the general *modern* high character which these bill brokers hold.—*Wall Street Journal.*

# COMMERCIAL REGULATIONS.

## OF MONEYS OF FOREIGN COUNTRIES IN PAYMENT OF DUTIES.

CIRCULAR INSTRUCTIONS TO COLLECTORS AND OTHER OFFICERS OF THE CUSTOMS.

TREASURY DEPARTMENT Sept. 19th, 1851.

In view of the embarrassments existing at some of the principal ports, and the want of uniformity in the practice of assessing duties upon merchandise invoiced in depreciating foreign currencies, it is deemed proper to establish some uniform regulations on the subject, for the future government of the officers of the customs.

The law requires invoices of all imported merchandise, subject to an ad valorem duty, to be made out in the currency of the country or place from whence the importation is made. The basis of value upon which the duties are to be assessed, is the true market value in the principal markets of the country, at the period of exportation to the United States, exhibited in such foreign currency at its intrinsic value, converted into money of the United States according to the rates of value at which said currency may have been determined agreeably to law.

Congress has fixed the value of some of the foreign currencies at specific rates; but where the invoice cost of goods, wares, or merchandise, is exhibited in a depreciated currency, issued and circulated under the authority of any foreign government, the President of the United States is duly authorized by law, to cause to be established "fit and proper regulations," for estimating the duties on any such goods, wares, and merchandise.

In all cases, therefore, where the foreign currency is depreciated, its value in money of the United States, is to be ascertained in the mode prescribed by the circular instructions issued by the Department, by direction of the President, under dates of the 14th May, and 16th August, 1831, and 16th October, 1832. Although the consular certificate required by said instructions of the value in United States money, of any foreign depreciating currency, is ordinarily to be received and taken as evidence of such value, yet it is not to be deemed conclusive in cases where facts or circumstances may exist, producing a rational belief that manifest error attaches to such certificate.

Where Congress has fixed the value in American money of any foreign currency, it is to be understood that the value is to attach in all cases in estimating that duties; and should any of said currencies become depreciated, either by the issue of government paper money or otherwise, the collectors, nevertheless, will make no alteration in the value in estimating duties, without the previous authority of the Department, which authority will be promptly given in all cases, so soon as the fact of such depreciation is authentically brought to its knowledge. Such information has been received as regards the Austrian florin, which, until further instructions on the subject, the collectors will consider as depreciated currency, and levy the duties accordingly on invoices stated in it. The foreign currencies alluded to above, the value of which is fixed by various acts of Congress, are noted at foot for your information and government.

It frequently happens that invoices stated in the currency of the country of shipment, have expressed on the face of them, in the currency of another country, the amount for which bills of exchange may have been drawn in payment of the goods, or for other cause. In cases where both currencies have a specie basis, any difference which may exist between the two amounts thus exhibited, is presumed to arise from the interest on the sight of the bill, or a regular difference of exchange between the two points; and where the currency of the country of shipment is depreciated, a similar difference may exist between the specie value of the foreign currency thus expressed on the face of the invoice, and the consular certified specie value of the local depreciated currency, in which the invoice is stated. As the law provides that the duties shall be estimated on the specie value of the currency of the country from whence the shipment is made, that mode, as a general rule, will therefore be adopted, yet where the difference between the value of two currencies, expresed upon the face of the invoice, is so great as to excite a well-founded belief that either deception or error exists, the appraisers are required to investigate the facts, and if they ascertain that there has been error, either in the consular certificate in giving the specie value of a depreciated currency, or that otherwise, the true specie value in currency of the United States has not been correctly set forth, it will become their duty to correct said error,

by advancing the cost or value given in the invoice or on entry, either in the price of the goods, or the estimated specie value of the depreciated currency.

THOMAS CORWIN, Secretary of the Treasury.

The following are the foreign currencies referred to in the preceding circular, the value of which has been fixed by law, and are not to be deviated from, in assessing duties without the previous authority of this department:—

| | |
|---|---|
| Franc of Erance and Belgium | $0 18.6 |
| Florin of Netherlands | 0 40 |
| Florin of Southern States of Germany | 0 40 |
| Guilder of Netherlands | 0 40 |
| Livre Tournois of France | 0 18.5 |
| Lira of the Lombardo Venitian Kingdom | 0 16 |
| Lira of Tuscany | 0 16 |
| Lira of Sardinia | 0 18.6 |
| Milrea of Portugal | 1 12 |
| Milrea of Azores | 0 83½ |
| Marc Banco of Hamburg | 0 35 |
| Pound sterling of Great Britian | 4 84 |
| Pound sterling of British Provinces of Nova Scotia, New Brunswick, Newfoundland, and Canada | 4 00 |
| Dollars of Mexico, Peru, Chili, and Central America | 1 00 |
| Pagoda of India | 1 84 |
| Real Vellen of Spain | 0 05 |
| Real Plate of Spain | 0 10 |
| Rupee Company | 0 44.5 |
| Rupee of British India | 0 44.5 |
| Specie Dollar of Denmark | 1 05 |
| Rix Dollar or Thaler of Prussia and the Nothern States of Germany | 0 69 |
| Rix Dollar of Bremen | 0 78¾ |
| Rouble Silver of Russia | 0 75 |
| Specie Dollar of Sweeden and Norway | 1 06 |
| Florin of Austria | 0 48.5 |
| Ducat of Naples | 0 80 |
| Ounce of Sicily | 2 40 |
| Tael of China | 1 48 |
| Leghorn Livres | 0 16 |

## IMPOSITIONS AND FRAUDS IN FOREIGN MARKETS.

CIRCULAR OF INSTRUCTIONS TO COLLECTORS AND OTHER OFFICERS OF THE CUSTOMS.

TREASURY DEPARTMENT Sept. 18, 1851.

It is deemed expedient, for the better security of the public revenue from impositions and frauds, to modify the circular instructions, No. 33, issued by the Department, under date of the 27th of February, 1850, in regard to goods, wares and merchandise, of the growth, production, or manufacture of the United States, as likewise articles of foreign origin, upon which the import duties shall have been paid, transported from one port of the United States to another port within the same, via the Isthmus of Panama.

The following rules and regulations are prescribed, and a strict conformity therewith enjoined upon Collectors and parties interested. Where any goods, wares or merchandise, of the description before mentioned, are intended to be transported from any port of the United States, situated either on the Atlantic or Pacific sea-board, to any other port within the United States, to be conveyed or carried across the Isthmus of Tehauntepec, the Isthmus of Panama, or over the San Juan de Nicaragua route, to wit:—

*First.* It is to be distinctly understood that the law does not authorize either drawback or warehouse goods, under bond, to be transported by the routes before indicated, and become entitled to the privileges of the drawback and warehousing act.

*Second.* Parties wishing to ship goods for transportation by the routes above mentioned, must, before lading the same on board the vessel at the port of shipment, give at least forty-eight hours' notice, in writing, to the collector of said port of his intention to make the shipment, describing the goods and their place or places of deposit; where-

upon the collector will direct an inspector of the customs to examine and superintend the boxing, packing, or casing, as the case may be, of the goods, which must be securely corded, and a lead seal attached thereto, by said officer, to prevent the boxes, bales, cases, or packages from being opened. The expense of cording and sealing to be paid by the owner of the goods. The inspector will make due return to the collector, describing the goods, and the marks placed upon the packages, boxes, &c.

*Third*, Triplicate invoices, describing the contents of the bales, boxes, cases, or packages, duly certified by the inspector, must be presented to the collector, on manifesting the same outward, in pursuance of the 11th section of the Statistical act of the 20th February, 1820. These invoices will be countersigned by the collector, one to be attached to the manifest handed to the shipper, another retained by the collector, and the third deposited in the post-office on the same day the manifest outward is made, addressed to the collector of the port of the United States to which the goods may be destined.

*Fourth*, Upon the arrival of the goods at the designated port of the United States, and the production at the Custom-house of the manifest and annexed invoice aforesaid, the collector will direct due examination and inspection to be made by the United States appraisers, where there are such officers at the port, and where there are no such officers, then by some proper officer of the revenue or customs; to ascertain whether the cords and seals have been disturbed, and that the contents of the packages, boxes, &c., correspond with those described in the certified invoice required by these instructions.

If, upon this examination, the collector should be satisfied that the goods are identical with those described in the certified invoice forwarded to him by the collector at the port of shipment, he may grant a permit for the delivery of the goods to the parties entitled to receive the same; but if not satisfied on this point, he will exact the appropriate duties.

THOMAS CORWIN, *Secretary of the Treasury.*

## SECRECY ENJOINED ON TELEGRAPH OPERATORS.

The following important law with regard to Telegraph offices, and operators, was passed at the last Session of the Pennsylvania Legislature, and is now in force in that State. The law is embraced in the subjoined 7th and 8th sections of an act relating to a great variety of other matters. The Legislature of Pennsylvania has a system or custom of including in a single act a number of laws, that have no relation to each other—a custom which we should say would be "more honored in the breach than in the observance."

AN ACT RELATING TO THE COMMENCEMENT OF ACTIONS ETC., RELATIVE TO PENALTIES ON TELEGRAPH OPERATORS, ETC.

SEC. 7. That from and after the passage of this act, it shall not be lawful for any person connected with any line of telegraph within this Commonwealth, whether as superintendent, operator, or any other capacity whatever, to use or cause to be used, or make known, or cause to be made known, the contents of any despatch of whatsoever nature, which may be sent or received over any line of telegraph in this Commonwealth, without the consent or direction of either party sending or receiving the same; and all despatches which may be filed in this Commonwealth, for transmission to any point, shall be so transmitted without being made public, or their purport in any manner divulged at any intermediate point, on any pretense whatever, and in all respects the same inviolable secresy, safe keeping and conveyance, shall be maintained by the officers and agents employed upon the several telegraph lines of this Commonwealth, in relation to all despatches which may be sent or recevied, as is now enjoined by the laws of the United States in reference to the ordinary mail service; *Provided*, That nothing in this act contained shall be so construed, as to prevent the publication at any point of any dispatch of public nature, which may be sent by any person or persons with a view of general publicity.

SEC. 8. That in case any person, superintendent, operator, or who may be in any other capacity connected with any telegraph line in this Commonwealth, shall use, or cause to be used, or make known, or cause to be made known, the contents of any dispatch sent from or received at any office in this Commonwealth, or in anywise unlawfully expose another's business or secrets, or in anywise impair the value of any corres-

pondence sent or received, such person being duly convicted thereof, shall, for every such offense, be subject to a fine of not less than one hundred dollars, or imprisonment not exceeding six months, or both, according to the circumstances and aggravation of the offense.

## OF FOREIGN MERCHANDISE IMPORTED INTO THE UNITED STATES.

[TRANSLATED FROM LE JOURNAL DES DEBATS, OF PARIS, AUGUST 31, 1851.]

"Instructions have been received by the subscriber, from his government, which makes it his duty to make known that the laws of the United States require that the value of all merchandise imported from a foreign nation into the United States, be stated by declaration, under oath, by the persons to whom they belong. If such persons are residents of the United States, they must swear at the place, and at the time of the entry of the goods. If the owners of the goods are not residents in the United States, they must accompany them with an invoice, confirmed by their oath, either before the United States Consul, or before a local magistrate, whose signature is legalized by the Consul.

"A great many merchants, manufacturers, and foreigners, having neglected to accompany their goods with this indispensable certificate, certified or legalized by the Consul, abuses and irregularities have been caused by the omission. Consequently, the government have ordered the officers of the Custom-houses in the United States, to rigorously exact the observance of this formality. In future, if goods sent are offered without such documents, the entry will be refused, and they will remain in the public bond-houses, at the expense and risk of the proprietors, till the arrival of the proper certificates. S. G. GOODRICH, *Consul of the United States of America, in Paris.*"

## TONNAGE-DUTY AND TARIFF OF TURKS ISLAND.

The *Grand Turk's Gazette* of the 3d of September, 1851, says:—We take this mode of calling the attention of the mercantile interests abroad to the fact of the entire abrogation, within the presidency, of all tonnage duties, and the otherwise very liberal reduction which has been effected in our tariff, especially in regard to provisions, and every description of article required in the culture of our staple.

### ARTICLES EXEMPT FROM DUTY.

Ale and porter, in wood; articles imported or supplied out of a bonded warehouse for the colonial service; articles of every description imported or supplied out of a bonded warehouse for the use of the President; asses; bullion; carts and cart-harness; cart-wheels, arms and boxes for cart-wheels; cedar and yellow wood; cider, (in wood;) coin; cotton-wool: diamonds; drugs, and dye woods, and stuffs; flax and tow; fruit, (fresh,) vegetables, and roots of all kinds; hemp; hay; ice; lead or zinc; lignumvitæ; mahogany; manures of all kinds; medicines; mules; oats; osnaburgs, and bagging; printed books and pamphlets; provisions and stores of every description, imported or supplied from a bonded warehouse, for the use of her majesty's land or sea force; tallow and raw hides; tannning; tortoise shells; trees imported for planting; vegetables of all kinds.

## THE BRITISH MERCANTILE MARINE AMENDMENT ACT.

By the Mercantile Marine Amendment Act, just passed, the advance-notes to seamen may be issued upon signing the agreement, instead of, as heretofore, four hours after. All colonial ships arriving to discharge cargo in any port in the United Kingdom, their crews must be discharged and engaged before the shipping-master; but such vessels as merely touch at our ports do not become subject to that law; and all ships making short voyages may have what is called a running agreement, but no such agreement is to extend beyond the 30th of June or 31st of December, each year. Coasting vessels are not obliged to keep the official log, and if under eighty tons are exempt from carrying agreement. Misconduct of pilots, endangering life or limb, to be deemed guilty of misdemeanor. The law seems, very justly, stringent upon the desertion of a seaman after signing articles, and the justice before whom he is convicted has a power of deducting from the amount £3 of his wages, for the expenses; also, if a master or mate is convicted of felony, or sentenced summarily, or otherwise, for drunkenness or tyraany, the Board of Trade may cancel or suspend his certificate,

whether of competency or service. After 1st September, 1851, the shipping-master is the person to whom masters of foreign going ships must produce the certificate and agreement, (and not to the Collector and Controller,) and he is to give a certificate of their production to satisfy the officers of customs.

# STATISTICS OF POPULATION, &c.

## POPULATION OF DELAWARE.

| Counties. | 1840. | 1850. | Increase. | Decrease. |
|---|---|---|---|---|
| Kent | 19,858 | 22,471 | 2,613 | ... |
| New Castle | 33,118 | 42,669 | 9,551 | ... |
| Sussex | 25,132 | 25,268 | 136 | ... |
| Total | 78,107 | 90,407 | 12,300 | ... |
| Of which were slaves | 2,605 | 2,688 | 83 | |

PROGRESSIVE MOVEMENT OF DELAWARE.

| Date of Census. | Total population. | Decennial increase. Numerical. | per ct. | Date of Census. | Total population. | Decennial increase. Numerical. | per ct. |
|---|---|---|---|---|---|---|---|
| 1790 | 59,098 | .... | .. | 1830 | 76,748 | 3,999 | 5.6 |
| 1800 | 64,273 | 5,175 | 8.7 | 1840 | 78,107 | 1,359 | 1.4 |
| 1810 | 72,674 | 8,401 | 13.1 | 1850 | 90,407 | 12,300 | 15.8 |
| 1820 | 72,749 | 75 | 0.0 | | | | |

## POPULATION OF MARYLAND.

| Counties. | 1840. | 1850. | Increase. | Decrease. |
|---|---|---|---|---|
| Alleghany | 15,690 | 22,873 | 7,183 | ... |
| Anne Arundel | 29,532 | 33,338 | 2,856 | ... |
| Baltimore city | 102,313 | 169,012 | 66,669 | ... |
| Baltimore County | 32,066 | 41,589 | 9,523 | ... |
| Caroll | 17,241 | 18,123 | 882 | ... |
| Caroline | 7,806 | 9,692 | 1,886 | ... |
| Calvert | 9,229 | 9,618 | 389 | ... |
| Cecil | 17,232 | 18,837 | 1,605 | ... |
| Charles | 16,027 | 16,162 | 139 | ... |
| Dorchester | 18,843 | 18,893 | 50 | ... |
| Frederick | 36,405 | 38,493 | 2,088 | ... |
| Harford | 17,121 | 19,366 | 2,245 | ... |
| Kent | 10,842 | 11,357 | 515 | ... |
| Montgomery | 14,699 | 15,860 | 1,161 | ... |
| Prince George | 19,539 | 21,552 | 2,011 | ... |
| Queen Anne | 12,633 | 14,485 | 1,852 | ... |
| St. Mary | 13,224 | 13,681 | 457 | ... |
| Somerset | 19,580 | 22,458 | 2,878 | ... |
| Talbot | 12,096 | 13,811 | 1,715 | ... |
| Washington | 28,850 | 30,943 | 2,093 | ... |
| Worcester | 18,377 | 18,870 | 493 | ... |
| Total | 469,232 | 575,150 | 105,918 | ... |
| Of which were slaves. | 89,495 | 89,204 | ..... | 291 |

PROGRESSIVE MOVEMENT OF MARYLAND.

| Date of Census. | Total population. | Decennial increase. Numerical. | per ct. | Date of Census. | Total population. | Decennial increase. Numerical. | per ct. |
|---|---|---|---|---|---|---|---|
| 1790 | 319,728 | ..... | .. | 1830 | 447,040 | 39,690 | 9.7 |
| 1800 | 341,548 | 21,820 | 6.8 | 1840 | 469,232 | 22,192 | 4.9 |
| 1810 | 380,546 | 38,998 | 11.4 | 1850 | 575,150 | 105,918 | 22.5 |
| 1820 | 407,350 | 26,804 | 7.0 | | | | |

## POPULATION OF THE DISTRICT OF COLUMBIA.

| Counties. | 1840. | 1850. | Increase. | Decrease. |
|---|---|---|---|---|
| Washington county..... | 3,069 | 3,304 | 234 | ... |
| Washington city ..... | 23,364 | 40,001 | 16,637 | ... |
| Georgetown..... | 7,312 | 8,366 | 1,054 | ... |
| Total..... | 33,745 | 51,670 | 17,925 | ... |
| Of which were slaves... | 3,320 | 3,688 | 368 | ... |

## PROGRESS OF BOSTON IN WEALTH, POPULATION, ETC.

Below we give a table of the population, value of real estate, value of personal estate, and total valuation of the city of Boston, from 1820 to 1850. In addition, we likewise give the amount of railway opened in Massachusetts in each year; and by this our readers will see, in some degree, how much the prosperity of Boston is owing to her railway system. The table was prepared by the editor of the *American Railway Times* for Mr. Kirkwood's admirable report upon the Pacific Railway. It will be remarked that the account of the railways is only brought up to January, of the year 1850, and the reader, without this timely caution, might be misled by accounts in the *Merchants' Magazine*, made up to a later date.

POPULATION AND VALUATION OF BOSTON, FROM 1820 TO 1850, INCLUSIVE.

| Year. | Population. | Real estate. | Personal. | Total. | Miles r'road ope'd each year. |
|---|---|---|---|---|---|
| 1820 ..... | 43,298 | 21,687,000 | 16,602,200 | 38,289,200 | .. |
| 1825 ..... | 58,277 | 30,892,000 | 21,450,600 | 54,442,600 | .. |
| 1830 ..... | 61,392 | 36,960,000 | 22,626,000 | 59,568,000 | .. |
| 1831 ..... | ..... | 37,675,000 | 23,023,200 | 60,698,200 | .. |
| 1832 ..... | ..... | 39,145,200 | 28,369,200 | 67,514,400 | .. |
| 1833 ..... | ..... | 40,966,400 | 29,510,800 | 70,477,200 | .. |
| 1834 ..... | ..... | 43,140,600 | 31,665,200 | 74,805,800 | 53 |
| 1835 ..... | 78,603 | 47,552,800 | 31,749,800 | 79,302,600 | 70 |
| 1836 ..... | ..... | 53,370,000 | 34,895,000 | 88,245,000 | 23 |
| 1837 ..... | ..... | 56,311,600 | 33,274,200 | 89,583,800 | 10 |
| 1838 ..... | ..... | 57,372,400 | 32,859,200 | 90,231,600 | 31 |
| 1839 ..... | ..... | 58,577,400 | 33,248,600 | 91,826,400 | 54 |
| 1840 ..... | 98,383 | 60,424,200 | 34,157,400 | 94,584,600 | 77 |
| 1841 ..... | ..... | 63,963,300 | 36,043,600 | 98,006,600 | 125 |
| 1842 ..... | ..... | 65,499,000 | 41,223,800 | 105,723,700 | 30 |
| 1843 ..... | ..... | 67,673,400 | 42,372,600 | 110,056,000 | 16 |
| 1844 ..... | ..... | 72,048,000 | 46,402,300 | 118,450,300 | 23 |
| 1845 ..... | 114,366 | 81,991,400 | 53,957,300 | 135,948,700 | 122 |
| 1846 ..... | ..... | 90,119,600 | 58,720,000 | 148,839,600 | 78 |
| 1847 ..... ... | ..... | 97,767,500 | 64,595,900 | 162,360,400 | 105 |
| 1848 ..... | ..... | 100,403,200 | 67,324,800 | 167,728,000 | 171 |
| 1849 ..... | ..... | 102,827,500 | 71,352,500 | 174,180,200 | 79 |
| 1850 ..... | 138,788 | 105,093,400 | 74,907,100 | 180,000,500 | 54 |
| | | | | | 1,130 |

## THE UNITED KINGDOM IN 1800 AND 1850.

The statistical progress of the United Kingdom in fifty years, is thus stated by a London cotemporary:—

"The population of Great Britain has nearly doubled between 1800 and 1850; at the beginning of the century it was below 11,000,000, and it is now upwards of 20,000,000. Adding the population of Ireland, the United Kingdom will number upwards of 28,000,000 inhabitants. In manufactures and Commerce there have been prodigious advances; but the money value of our imports and exports is very far from showing the real increase, owing to the extraordinary reduction in the price both of

raw materials and manufactured goods. For example: in 1800 our importation of cotton wool was 56,000,000 lbs., and in 1849 it was 755,000,000 lbs., showing an increase of thirteen to fourteen fold; but the increase in the value of cotton goods and yarn exported is only from £6,000,000 to £27,000,000, or four-and-a-half fold. The number of children in our day schools has increased, within the half century, from 500,000 to more than 2,000,000; whilst Sunday schools, also, containing more than 2,000,000 of children, are almost entirely the growth of the present century. Perhaps the increase in the number of newspapers may afford a fair test of the growth of popular intelligence: in 1801 the number of stamps issued for newspapers was 16,085,085, and in 1849 it was 72,447,707; being an increase of four-and-a-half fold. But the increase in the general size of the newspaper is far greater than in the number issued, and may be regarded as even a more decisive indication of the intellectual appetite of the readers, and of the extent of their reading."

## CENSUS OF THE BAHAMA ISLANDS FOR 1851.

The official returns of the population of the Bahama Islands, as taken on the 30th of March, 1851, give the following result:—

| | Last census. | Present cen's. | Increase. | Dec. |
|---|---|---|---|---|
| New Providence | 8,385 | 8,159 | .. | 226 |
| Harbor Island | 1,745 | 1,840 | 95 | ... |
| Eleuthera (including Spanish Wells and Cays) | 3,712 | 4,610 | 898 | ... |
| Rum Cay | 560 | 858 | 298 | ... |
| Crooked Island | 935 | 1,092 | 157 | ... |
| St. Salvador | 674 | 1,828 | 1,154 | ... |
| Exuma | 1,682 | 2,027 | 345 | ... |
| Long Island | 1,286 | 1,477 | 191 | ... |
| Abaco | 1,890 | 2,011 | 121 | ... |
| Ragged Island | 313 | 347 | 34 | ... |
| Andros Island | 759 | 1,030 | 271 | ... |
| Grand Bahama | 812 | 922 | 110 | ... |
| Berry Islands | 161 | 236 | 75 | ... |
| Bimini and Gun Cay | ... | 150 | 150 | ... |
| Watling's Island | 315 | 384 | 69 | ... |
| Inagua | 172 | 530 | 358 | ... |
| Green Cay | ... | 7 | 7 | ... |
| Cay Sal | ... | 11 | 11 | ... |
| Total | 23,401 | 27,519 | 4,344 | 226 |

The grand total of the last census was 26,491, but, in making the above calculations, we have deducted the population of the Turks Island, Caicos and Mayuguama, amounting to 3,090, from the first column, these Islands being now under a separate government.

New Providence is the only Island in which a decrease of population has occurred; and this may be easily accounted for when we remember the emigration of laborers to Demerara, Jamaica, and Honduras, which took place some time since, and the more recent removal of many mechanics, laborers, &c., to Inagua.

The population of St. Salvador has increased nearly three-fold, and that of Inagua has been more than trebled.

The proportion of males to females is greater in all the islands except New Providence, Abaco, and Green Cay, where the females number sufficiently strong to give them a majority of 25 in the grand total. In Watling's Island the numbers of both sexes are equal.

The total increase of population within the Bahamas is 4,344.

## POPULATION OF VAN DIEMAN'S LAND.

The census of Van Dieman's Land has been published. The following is a comparative statement, with the results in 1847:—

| | 31st December, 1847. | 1st March, 1851. |
|---|---|---|
| Total population | 67,351 | 70,130 |
| Free population | 45,976 | 53,031 |
| Convict population | 21,375 | 17,099 |

The military having been reduced from 2,246 to 953; the increase of the free colonists appear less than the reality. Deducting the military, the following gives a more correct comparison:—

| | 1847. | 1851. | Increase. |
|---|---|---|---|
| Free population..... | 43,740 | 52,078 | 8,348 |

The total increase of population shows anything but a prosperous community, and is a strong fact against transportation.

# NAUTICAL INTELLIGENCE.

## NEW LIGHT-HOUSE IN THE STRAITS OF SINGAPORE.

DEPARTMENT OF STATE, WASHINGTON, *October* 10, 1851.

FREEMAN HUNT, Esq., *Editor Merchants' Magazine*:—

SIR:—I have the honor to transmit, enclosed, a copy of a communication from Mr. J. Balestier, late Envoy of this Government to South-Eastern Asia, of the 8th inst., respecting the erection of a new light-house in the Straits of Singapore. The subject being one of great interest to all parties engaged in Commerce with the East Indies and China, I furnish you this information for such use as you may think proper to make of it. I am, sir, respectfully, your obedient servant,

J. J. CRITTENDEN, *Acting Secretary.*

COPY.

WASHINGTON, D. C., *October* 8, 1851.

TO THE HON. J. J. CRITTENDEN, *Acting Secretary of State*:—

SIR:—I have the honor to make known to you, for the information of the public generally, the position of the Horsburg Light-house, now in the process of construction and to be lighted on, or about, the first of January, 1852, in the Straits of Singapore, at the entrance of the China Sea, in latitude 1° 20′ North, longitude 104° 25′ East of Greenwich. Bearing from Singapore Town thirty-three geographical miles, and eight geographical miles from the nearest head land.

The light will be revolving—period not yet determined upon—and it will be seen at a distance of sixteen geographical miles from the deck of the ordinary class of vessels, that navigate those seas. I have the honor to be, sir, your most obed't serv't,

J. BALESTIER, *late Envoy to South-Eastern Asia.*

## NEW LIGHT-HOUSE ON THE ISLAND LAGOSTA.

A new Light-house has lately been erected on the Island Lagosta, in Dalmatia, instead of the temporary one hitherto existing there. It stands on the summit of the point of land which, in the map of the coast navigation published by the I. R. Military Geographical Institution in Milan, is marked *Punta Scrigeva*, and commands the *Porto Rosso*, formed by the same point of land. The geographical bearings of the said Light-house are 42° 43′ North Latitude; 14° 31′ East Longitude, from the meridian of Paris.

The Light-house is illuminated in the night from the 15th May, 1851, with fixed light by means of the Fresnel Apparatus, 1st class. The height of the tower is 330 Vienna feet above the level of the sea. Its light is apparent in clear weather, to an observer raised 12 feet above the surface of the water, at a distance of 25 miles at 60 to a degree.

## WATER BALLASTING FOR SHIPS.

Some time since Dr. David Blair White, of Newcastle-upon-Tyne, patented a plan for ballasting ships by means of water; and the patentee states that the whole arrangement is in such an advanced state, and its decided advantages over other kinds of ballast so apparent, that the apparatus will be shortly ready for application to any vessels whose owners may be desirous of availing themselves of it. The Coal brig Ben-

ton, Capt. Blackett, 250 tons, which has long been fitted with the apparatus, has completely established the economy, safety, and efficiency, in every point, of this mode of ballasting. On her last arrival in the Thames, and after discharging her cargo, her crew commenced at seven o'clock on Thursday morning last to fill the ballast bags, which will hold sixty-seven tons of water. In forty minutes the necessary quantity was stowed away, and with the tide she sailed down the river on her passage to Sunderland for another cargo. Between sixty and seventy visitors witnessed the operation, which was highly satisfactory.

## LIGHTS AT SPURN POINT.

TRINITY HOUSE, LONDON, *August* 6.

The encroachments of the sea upon the Spurn Point, at the entrance of the river Humber, having made the preservation of the low light in its ordinary position, both difficult and uncertain; and it having been ascertained that the exhibition of a light situate to the north-westward of the high Light-house, is equally effective for the purposes of navigation, as that heretofore exhibited to the south eastward of the said high Light-house, notice is hereby given, that the low light at Spurn Point will henceforth be exhibited from a building, which has been set up to the north-westward of the high Light-house, and that to the south eastward thereof discontinued.

(By order,) J. HERBERT, Secretary.

## REVOLVING LIGHT ON CAPE PINE, NEWFOUNDLAND.

On the 1st January 1851, a revolving light was established on Cape Pine, the southermost point of Newfoundland.

The Iron Tower, which is circular, and painted with red and white bands alternately is 56 feet high, but the light is elevated 302 feet above the sea, and therefore in clear weather may be seen at the distance of 22 miles. The light revolves so as to be visible at intervals of 20 seconds, or three times in every minute, and may be seen in all directions from seaward.

The Light Tower stands at the distance of 450 feet in from the shore, and is in latitude 46° 37′ 12″ North, and longitude 53° 24′ 42″ west.

Cape Pine lies 22 miles to the westward of Cape Race, and 108 miles S. E. by E. ¼ E. by compass, from the fixed light on St. Pierre Island.

The variation of the compass is about 26° west.

## THE NOVEL RUDDER OF THE SHIP WARREN.

Capt. COMSTOCK, of the United States steamship Baltic, recently deposited in the Liverpool Exchange, as we learn from the *European Times*, an extraordinary piece of naval construction.

Necessity, in this as in most cases of a similar kind, has been the "mother of invention." The ship Warren, bound from Glasgow to New York, having encountered severe weather, lost her rudder on the outward voyage, and there being no timber of sufficient size on board to construct a new one, and none of the requisite machinery to connect it, even if made to the tiller, a most ingenious device was hit upon by Captain Lawton, which was successfully carried out by the crew, by which means the ship with a valuable cargo and 150 passengers, was safely steered to her port of destination. The Warren drew about 16 feet water, and a suffieient number of ropes being fastened so as to form a sort of hempen plank, very similar to a close door mat on a gigantic scale, the whole was bound together with transverse pieces of wood, thoroughly lashed throughout, and secured with iron rods at the edges. For the hinge, a series of chains were substituted, and two more with blocks and connecting ropes, running under the quarter, and fastened to the windlass, gave the steersman almost as complete control as the ordinary wheel. This truly ingenious piece of mechanism has elicited the warmest expressions of admiration from many nautical veterans who have inspected it; and to those curious in such matters, it will repay a visit to the Exchange-rooms where Mr. Warburton, with his usual courtesy, will explain its action.

### REVISION OF THE MERIDIAN.

The London Athenæum says, that in consequence of the confusion existing between the maritime calculations of different powers, and the unfortunate occurrences to which it sometimes leads, the naval powers of the north, (Russia, Sweden, Denmark, and Holland,) have entered into an agreement to open conferences on the old subject of a common meridian for all nations. France, Spain, and Portugal, it is said have given in their adhesion to the scheme, and a hope is held out that England will come into the arrangement. Opinion seems to be in favor of the selection of an entirely neutral point of intersection—say Cape Horn.

## RAILROAD, CANAL, AND STEAMBOAT STATISTICS.

### STATISTICS OF THE BALTIMORE AND OHIO RAILROAD.

The Baltimore and Ohio Railroad was opened for travel and transportation in 1830. The main stem extends from Baltimore, in Maryland, to Cumberland, in Ohio—a distance of 179 miles. The cost of the road and equipments, according to the last annual report of the directors, amounts to $10,069,571, or $54,283 per mile. It has two branch roads—the Washington and Frederick. The former diverges from the main stem at the Relay House, nine miles from Baltimore, and the latter at Monocacy, fifty-nine miles from Baltimore. We give below a tabular statement of the places, distances, and fares on the main stem of the Baltimore and Ohio Railroad, as follows:—

| Places. | Distances. Miles. | Fares. Cents. | Places. | Distances. Miles. | Fares. Cents. |
|---|---|---|---|---|---|
| Baltimore | .. | .. | Knoxville | 79 | 3 15 |
| Mount Clare | 1 | .. | Weaverton | 80 | 3 20 |
| Relay House | 9 | 25 | Harper's Ferry | 82 | 3 30 |
| Avalon | 10 | 37 | Duffields | 88 | 3 50 |
| Ilchester | 13 | 50 | Kearneyville | 93 | 3 70 |
| Ellicott's Mills | 15 | 60 | Martinsburg | 101 | 4 00 |
| Elysville | 21 | 85 | Tabbs | 104 | 4 15 |
| Woodstock | 25 | 1 00 | Hedgesville | 108 | 4 30 |
| Mariottsville | 29 | 1 15 | Licking, W. S. | 117 | 4 70 |
| Skyesville | 32 | 1 25 | Hancock | 124 | 5 00 |
| Hood's Mill | 35 | 1 40 | Sir John's, R. | 130 | 5 15 |
| Woodbine | 38 | 1 50 | Great Cacapon | 133 | 5 30 |
| Mount Airy | 44 | 1 75 | D. G. Tunnel | 142 | 5 70 |
| Monrovia | 50 | 2 00 | 12 W. Station | 151 | 6 04 |
| Ijamsville | 54 | 2 15 | Paw Paw | 154 | 6 15 |
| Monocacy | 59 | 2 35 | Little Cacapon | 158 | 6 30 |
| Buckeyston | 63 | 2 50 | South Branch | 163 | 6 50 |
| Davis, W. H. | 65 | 2 60 | Gr'n Sp. Run | 165 | 6 60 |
| Point of Rocks | 70 | 2 80 | Patterson's | 171 | 6 85 |
| Catoctin, Sw | 72 | 2 90 | Cumberland | 179 | 7 00 |
| Berlin | 76 | 3 05 | | | |

It will be seen, by the above table, that the fare from Baltimore to Cumberland, 179 miles, is $7, or nearly four cents per mile. The fare from New York to Dunkirk, by the Erie Railroad, a distance of 469 miles, is $8, which is less than two cents per mile. The low rate on the Erie Road is mainly on account of the competing line from Albany to Buffalo, and the low fare in the Hudson River steamers, from New York to Albany. The distance from the former to the latter place is 328 miles, and the fare is $6 60, or nearly two cents per mile.

Since the foregoing statement was in type, we have learned that the Baltimore and Ohio Railroad Company have reduced their rate of fare. The fare from Baltimore to Cumberland is now fixed at $5; to Hancock, $4 35; to Martinsburg, $3 50; to Harper's Ferry, $2 85; to Weaverton, $2 80; to Point of Rocks, $2 45; to Frederick, $2 15; to Skyesville, $1 10; to Ellicott's Mills, 37 cents; and to the Relay House, 25 cents.

TRADE, REVENUE, EXPENSES, PROFITS AND DIVIDENDS OF THE BALTIMORE AND OHIO RAILROAD, FROM THE TIME OF ITS OPENING, IN 1830, TO THE PRESENT DATE, SEPTEMBER 30TH, 1850.

| | RECEIPTS. | | | | | | | | EXPENSES. | DIVIDENDS | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | PASSENGERS. | | | | TONNAGE. | | | | | | | | |
| Years ending Oct. 1st. | Carried in Washington branch trains. | Carried in main stem trains. | Total number of passengers on both roads. | Receipts from passengers and mails. | Eastward freight, tons. | Westward freight, tons. | Total freight, tons. | Receipts from tonnage. | Total receipts, passengers and tonnage. | Total for passengers and tonnage. | Net receipts. | Per cent. | Amount. | Surplus Reinvested. |
| 1830..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | $14,711 | $11,985 | $2,726 | | | |
| 1831..... | ..... | 81,905 | 81,905 | $27,250 | 3,876 | 2,055 | 5,931 | $4,155 | 31,405 | 10,995 | 20,410 | . | $69,975 | $15,325 |
| 1832..... | ..... | 89,022 | 89,022 | 67,910 | 29,445 | 11,640 | 41,085 | 69,027 | 136,937 | 75,673 | 61,264 | | | |
| 1833..... | ..... | 88,633 | 88,633 | 83,233 | 37,166 | 25,589 | 62,755 | 112,447 | 195,680 | 138,485 | 57,195 | .. | 30,061 | 27,134 |
| 1834..... | ..... | 94,844 | 94,844 | 89,182 | 36,192 | 19,929 | 56,121 | 116,255 | 205,437 | 138,402 | 67,035 | .. | ..... | 67,035 |
| 1835..... | 12,147 | 85,611 | 97,758 | 93,540 | 46,979 | 25,655 | 72,634 | 169,828 | 263,368 | 161,216 | 102,152 | .. | 45,002 | 57,150 |
| 1836..... | 75,416 | 81,686 | 157,102 | 128,126 | 40,805 | 25,898 | 66,703 | 153,186 | 281,312 | 212,937 | 68,375 | .. | ..... | 68,375 |
| 1837..... | 73,474 | 67,225 | 140,699 | 145,625 | 40,697 | 33,901 | 74,598 | 155,676 | 301,301 | 289,125 | 12,176 | .. | ..... | 12,176 |
| 1838..... | 83,749 | 66,767 | 150,516 | 166,694 | 47,447 | 30,079 | 77,526 | 198,530 | 365,224 | 271,581 | 93,643 | .. | ..... | 93,643 |
| 1839..... | 86,964 | 65,537 | 152,501 | 173,860 | 54,573 | 45,878 | 100,451 | 233,487 | 407,347 | 312,700 | 94,647 | .. | ..... | 94,647 |
| 1840..... | 87,202 | 65,216 | 152,418 | 177,035 | 62,736 | 25,638 | 88,374 | 255,848 | 432,885 | 275,189 | 157,694 | .. | 80,000 | 77,694 |
| 1841..... | 107,136 | 64,493 | 171,629 | 179,616 | 42,056 | 23,443 | 65,499 | 211,454 | 391,070 | 239,622 | 151,448 | .. | 130,000 | 21,448 |
| 1842..... | 94,566 | 60,002 | 154,568 | 181,177 | 37,600 | 30,243 | 67,843 | 245,315 | 426,492 | 216,715 | 209,777 | .. | ..... | 209,777 |
| 1843..... | 78,425 | 71,108 | 149,533 | 274,617 | 55,523 | 27,191 | 82,714 | 300,618 | 575,235 | 295,833 | 279,402 | 2 | 140,000 | 139,402 |
| 1844..... | 99,160 | 74,661 | 173,821 | 336,876 | 69,886 | 33,224 | 103,110 | 321,743 | 658,619 | 311,633 | 346,986 | 2½ | 175,000 | 171,986 |
| 1845..... | 103,588 | 98,870 | 202,458 | 369,882 | 90,865 | 50,541 | 141,406 | 368,721 | 738,603 | 363,841 | 374,762 | .. | ..... | 374,762 |
| 1846..... | 157,157 | 123,107 | 280,264 | 413,341 | 110,356 | 83,559 | 193,915 | 468,346 | 881,687 | 454,840 | 426,747 | 3 | 210,000 | 216,847 |
| 1847..... | 151,753 | 136,921 | 288,674 | 447,020 | 183,824 | 79,511 | 263,335 | 654,917 | 1,101,937 | 590,829 | 511,108 | 3 | 210,000 | 301,108 |
| 1848..... | 170,196 | 160,974 | 331,170 | 488,376 | 205,174 | 66,071 | 271,252 | 725,288 | 1,213,664 | 662,106 | 551,558 | .. | ..... | 551,558 |
| 1849..... | 171,573 | 165,309 | 336,882 | 394,497 | 287,894 | 63,761 | 351,655 | 846,708 | 1,241,205 | 644,634 | 596,571 | .. | ..... | 596,571 |
| 1850..... | 214,360 | 180,905 | 395,265 | 438,375 | 402,905 | 74,650 | 477,555 | 905,430 | 1,343,805 | 609,589 | 734,216 | .. | ..... | 734,216 |
| Totals. | 1,766,866 | 1,922,796 | 3,689,662 | 4,676,232 | 1,885,999 | 778,463 | 2,665,462 | 6,516,979 | 11,207,924 | 6,287,930 | 4,919,992 | | 1,089,138 | 3,830,854 |

## NOTICES OF THE "CONDENSED HISTORY OF STEAM."

CLEVELAND, OHIO, *October* 8, 1851.

FREEMAN HUNT, ESQ., *Editor of the Merchants' Magazine, etc*:—

DEAR SIR:—It was only a day or two since, (owing to absence,) that I noticed the short article in your *Merchants' Magazine*, for August, (vol. XXV., page 244,) purporting to be an abstract of the progress of invention, in regard to the use of steam, and its application to water craft.

From this list, you have omitted several important names; such as De Caus, 1612; Papin, 1698; Bernouilli, 1753; Raynal, 1781; D'Auxinon, 1774; Perrin, 1775; Miller, 1787; Stanhope, 1793; Des Blaines, 1802; Stevens, 1790; Roosevelt and Livingston; all of whom, with others, *preceded* Fulton. With regard to Rumsey, Fitch, and Fulton, there are some important corrections to be made in the reported *dates*, which I presume you will cheerfully make.

No boat was propelled by steam by Mr. James Rumsey in New York in 1782, as is stated in the "Condensed History of Steam," nor was a boat propelled by him in this manner until the winter of 1785–6, which was done on the Potomac River, at Shephardstown, Virginia. Mr. Rumsey had constructed a working model, to be propelled by *manual* power, with setting poles attached to machinery, in 1784; and this is the boat to which General Washington certifies, in his letter of September 7th, 1784, published by you.

Rumsey's petition to the Legislature of Pennsylvania, November 26th, 1784, was for the exclusive right to this setting pole boat.

John Neilson, of Philadelphia, says, (see Rumsey's pamphlet and Fitch's reply, by Zachariah Poulson, Jr., Philadelphia, 1788,) that Rumsey told him he had *thought* of a steamboat in July, 1783. William Little says that Rumsey said, in 1784, that he had perfected the plan of a steamboat; and Charles Morrow and Joseph Barnes make affidavit that he began to build a *steamboat* in May, 1785, which was *tried* in December, 1785, and a defect in the machinery discovered. In the spring of 1786 he made a successful experiment at Shepherdstown, with a boat of nine (9) tons, working against the current of the Potomac at the rate of four or five miles an hour. I have before me a sketch of this boat, afterwards patented in Great Britain, and furnished me by A. W. Boteler, Esq., of Shepherdstown, Virginia. Mr. Boteler has a portion of Rumsey's first boiler.

John Fitch first conceived the idea of a steamboat in April, 1785; in 1786 constructed a working model; in 1787 built a boat of sixty tons, called the "Perseverance," which, owing to imperfections in the machinery, made only three (3) miles an hour that year, but in October, 1788, was propelled at the rate of eight (8) miles an hour, and made a trip from Philadelphia to Burlington, averaging six (6) miles an hour. Fulton's first boat, the "Clermont," made but four miles and seven-tenths of a mile per hour on the Hudson, in August, 1807, nineteen years after.

In 1772 and 1773, Oliver Evans reflected upon steamboats: Mr. Henry, of Lancaster, Pennsylvania, and Andrew Ellicott, of Maryland, also *thought* of the same thing, about the same time, but neither Evans, Henry, or Ellicott, *applied* their ideas to a boat, or even to a model. John Stevens, Jr., of New York, and Nicholas Roosevelt *applied* steam to vessels in 1790 and 1791.

Rumsey went to England in the latter part of 1787, and died there December 12th, 1792. Here Fulton made his acquaintance, as appears by a letter from Rumsey to Mr. G. W. West.

Fitch went to England and France, in 1793, and both Fulton and Livingston had his plans.

Fulton's first mention of steamboats is in a letter to Lord Stanhope, in 1793. His first working model was put in operation at Plompieres, in France, in 1803, and his first working boat on the Hudson in 1807; and yet the mass of mankind regard Fulton as the *inventor* of steamboats!!!

Fitch's model of 1785 had *wheels* at the sides, like Fulton's first working boat of 1807—and so had the boat of the Hulls, in England, in 1736.

Fulton's engine was made by Watt, in England, and the "Clermont" did not make as good speed in 1807 as the "Perseverance" did in 1788, when no plan or description of Watt's patent rotary engine had reached America.

In regard to steamboats—what did Fulton *invent?* The committee of the New York Legislature, in 1817, reported that the machine used by Livingston and Fulton, under their grant, was in substance and principle the *same* as that patented to John

Fitch in 1787, for 20 years, and that during the life of Fitch's monopoly, he had the exclusive right to it.

A long line of illustrious mechanics had expended their inventive genius upon the steam-engine and steamboat for more than 100 years before Fulton thought of the subject; and the plans of successful boats and engines were before him in 1793. What *room* was there for invention? The boat with both wheels and paddles had been put in motion by steam in France, England, and America.

The rotating engine had been completed; the crank connection with a shaft, and a revolving wheel, and rotating paddles, had all been made, and *used at good speed.* But on the Seine, on the Delaware, and on the Scotch Lochs, the amount of freight and passengers did not make it a *paying* business, and on the Hudson it *did* pay.

It is not surprising that errors of dates and of important facts should obtain notoriety on this subject. The perfection of steam navigation belongs to *no one man* or generation—it is an honor in which a great number of men, of high mechanical genius, have, or ought to have, a share; and my object in writing this hasty sketch is the performance of a duty to that crowd of illustrious inventors and improvers who preceded Fulton, but to whom common fame has denied a just share in the merits of the perfected steamboat. The subject is broad enough for a volume. Yours, truly,

CHARLES WHITTLESEY.

## VERMONT AND MASSACHUSETTS RAILROAD.

We give below the comparative receipts of this road for eight months in three years, together with the increase in 1851 over 1849 and 1850:—

| | 1849. | 1850. | 1851. | Over 1849. | Over 1850. |
|---|---|---|---|---|---|
| January ..... | $8,031 80 | $10,474 50 | $13,839 89 | $5,808 09 | $3,365 39 |
| February..... | 8,679 14 | 11,282 49 | 17,680 80 | 4,001 66 | 1,399 31 |
| March..... | 11,047 20 | 11,959 97 | 15,096 88 | 4,049 68 | 3,136 91 |
| April..... | 13,368 40 | 14,593 66 | 17,996 72 | 4,628 32 | 3,403 06 |
| May ..... | 12,518 37 | 14,142 38 | 17,348 35 | 4,829 98 | 3,205 97 |
| June ..... | 11,792 51 | 13,599 75 | 14,948 44 | 3,155 93 | 1,348 69 |
| July ..... | 11,996 36 | 16,106 27 | 18,645 30 | 6,648 94 | 2,539 03 |
| August..... | 14,767 61 | 19,118 56 | ..... | ..... | ..... |

## NEW YORK AND EUROPEAN STEAMSHIPS.

VALUE OF IMPORTS, AND DUTIES PAID BY STEAMSHIPS ARRIVING AT THE PORT OF NEW YORK FROM 1847 TO 1851.

In the *Merchants' Magazine* for September, 1851, (vol. xxv., pages 377-379,) we published a comparative statement of the amount of duties paid on merchandise by the Cunard steamers arriving at Boston and New York, from their commencement to the present year. The New York *Courier and Enquirer* has obtained from the Custom-house returns, the subjoined tabular detail, showing the value of, and the amount of duties paid on, imports into the port of New York by the vessels belonging to the "Steam Navigation Company," the "Ocean Steam Navigation Company," and the "United States Mail Steamship Company," since the establishment of these lines. The first-named of the above lines, for which Mortimer Livingston, Esq., is agent, connecting the port of New York with Havre, is monthly in its trips; the second is likewise monthly in its trips, between New York and Bremen, by way of Southampton, and is under the direction of Messrs. Sand, Muller, and Reira; and the third, for which E. K. Collins, Esq., is agent, is semi-monthly, plying between New York and Liverpool. The tables, here presented, will be interesting, in connection with the exhibit recently made in the pages of the *Merchants' Magazine*, of the duties paid on imports at New York and Boston by the Cunard steamers. The *Courier*, speaking of these statements, says:

"The rates of shipment, which some time ago underwent material revision between the Cunard and Collins steamers, remain the same; and farther, in detailing the amount of goods imported, and duties paid thereon, by either line, it is unnecessary to allow

for merchandise warehoused on arrivals, as whatever is imported by our steamships, is intended for, and does mostly, pass into immediate consumption."

VALUE AND AMOUNT OF DUTIES PAID ON GOODS BROUGHT BY THE STEAMERS "WASHINGTON" AND "HERMANN," OF THE OCEAN STEAM NAVIGATION COMPANY, FROM THE FIRST TRIP IN JULY, 1847, TO JUNE 2, 1851, INCLUSIVE.

| Date. | | Steamers. | Value of imports. | Duties on imports. |
|---|---|---|---|---|
| 1847—July | 30 | Washington | $431,597 | $107,831 05 |
| November | 9 | Washington | 152,405 | 34,758 70 |
| Total for 1847 | | | $584,002 | $142,589 75 |
| 1848—January | 16 | Washington | 305,058 | 77,519 90 |
| April | 7 | Washington | 201,212 | 51,191 65 |
| May | 22 | Hermann | 75,230 | 17,848 75 |
| June | 18 | Washington | 122,636 | 28,358 35 |
| August | 5 | Hermann | 509,544 | 128,988 65 |
| September | 6 | Washington | 552,476 | 140,142 00 |
| October | 4 | Hermann | 328,046 | 81,133 05 |
| November | 4 | Washington | 201,620 | 50,807 25 |
| Total for 1848 | | | $2,295,822 | $575,989 60 |
| 1849—January | 7 | Hermann | 389,861 | 98,807 90 |
| January | 8 | Washington | 592,976 | 151,209 40 |
| April | 13 | Hermann | 577,464 | 148,003 05 |
| May | 8 | Washington | 246,595 | 60,939 35 |
| June | 6 | Hermann | 229,454 | 55,094 65 |
| July | 5 | Washington | 606,061 | 153,462 05 |
| August | 6 | Hermann | 944,074 | 244,452 40 |
| September | 4 | Washington | 577,825 | 150,553 95 |
| October | 5 | Hermann | 418,763 | 107,227 90 |
| November | 7 | Washington | 370,277 | 94,786 10 |
| December | 15 | Hermann | 521,210 | 136,160 40 |
| Total for 1849 | | | $5,474,560 | $1,400,717 15 |
| 1850—April | 8 | Hermann | 572,657 | 147,855 10 |
| May | 4 | Washington | 315,178 | 76,623 00 |
| June | 9 | Hermann | 285,674 | 65,786 75 |
| July | 5 | Washington | 907,370 | 232,590 20 |
| August | 6 | Hermann | 781,690 | 203,822 25 |
| September | 4 | Washington | 570,750 | 149,215 30 |
| October | 9 | Hermann | 354,676 | 91,130 30 |
| November | 3 | Washington | 246,479 | 59,645 50 |
| Total for 1850 | | | $4,034,474 | $1,025,668 40 |
| 1851—January | 8 | Washington | 646,840 | 168,159 95 |
| April | 10 | Washington | 223,328 | 55,989 35 |
| May | 9 | Hermann | 216,066 | 54,909 50 |
| June | 2 | Washington | 199,211 | 52,303 10 |
| Total for 1851 | | | $1,285,445 | $331,361 90 |

VALUE AND AMOUNT OF DUTIES PAID ON GOODS BROUGHT BY THE STEAMERS "FRANKLIN" AND "HUMBOLDT," OF THE STEAM NAVIGATION COMPANY, FROM THE FIRST TRIP IN NOVEMBER, 1850, TO JUNE 17TH, 1851, INCLUSIVE.

| Date. | | Steamers. | Value of imports. | Duties on imports. |
|---|---|---|---|---|
| 1850—November | 14 | Franklin | $311,202 | $70,982 35 |
| 1851—January | 16 | Franklin | 1,263,649 | 311,378 50 |
| March | 22 | Franklin | 606,415 | 129,536 90 |
| May | 19 | Franklin | 390,957 | 76,455 05 |
| June | 17 | Humboldt | 416,130 | 89,182 70 |
| Total for 1851 | | | $2,677,151 | $606,553 15 |

VALUE AND AMOUNT OF DUTIES PAID ON GOODS BROUGHT BY THE COLLINS' STEAMERS FROM THE FIRST TRIP IN JULY, 1850, TO MAY 26, 1851, INCLUSIVE.

| Date. | Steamers. | Value of imports. | Duties on imports. |
|---|---|---|---|
| 1850—July 1..... | Pacific ..... | $137,653 | $33,842 60 |
| July 21..... | Atlantic ..... | 357,445 | 89,028 60 |
| August 10..... | Pacific ..... | 244,261 | 61,034 85 |
| September 2..... | Atlantic ..... | 193,722 | 47,326 25 |
| September 21..... | Pacific ..... | 121,416 | 29,848 30 |
| October 9..... | Atlantic ..... | 119,314 | 29,659 00 |
| October 27..... | Pacific ..... | 81,231 | 18,366 30 |
| November 12..... | Atlantic..... | 74,345 | 16,619 00 |
| December 4..... | Arctic..... | 70,339 | 18,348 15 |
| Total for 1850..... | | $1,399,726 | $344,073 05 |
| 1851—January 2..... | Baltic..... | 505,693 | 130,505 35 |
| January 28..... | Arctic..... | 605,018 | 154,786 00 |
| February 20..... | Baltic..... | 722,256 | 185,846 90 |
| March 15..... | Pacific ..... | 632,753 | 162,402 75 |
| March 24..... | Arctic..... | 270,427 | 67,260 25 |
| April 3..... | Baltic..... | 300,245 | 73,759 95 |
| April 19..... | Pacific ..... | 134,117 | 33,259 20 |
| May 11..... | Arctic ..... | 69,867 | 17,552 70 |
| May 26..... | Baltic..... | 65,194 | 16,977 95 |
| Total for 1851..... | | $3,305,570 | $842,351 05 |

AGGREGATE VALUE OF IMPORTS, AND DUTIES PAID ON THE SAME, BY THE ABOVE AMERICAN STEAMSHIP TRANS-ATLANTIC LINES, WITHIN THE DATES SPECIFIED.

| Lines. | Value of imports. | Duties on imports. |
|---|---|---|
| Ocean Steam Navigation Company ..... | $13,674,303 | $3,476,326 80 |
| Steam Navigation Company..... | 2,988,353 | 677,535 50 |
| United States Mail Steamship Company... | 4,705,296 | 1,186,424 10 |
| Total ..... | $21,367,952 | $5,340,286 40 |

| | |
|---|---|
| Aggregate amount of duties paid on goods imported by the Cunard steamers into New York, from the the first trip in January, 1848, to the 1st June, 1851—a period of three years and five months, including 71 entrances..... | $5,783,699 28 |
| Aggregate amount of duties paid on goods imported by the American trans-atlantic steamers into New York, from the first trip in July, 1847, to the 17th of June, 1851—a period of four years, including 56 entrances..... | 5,340,286 40 |
| Difference in receipts in favor of the Cunarders..... | $443,412 88 |
| Number of entrances at this port of the Cunard steamers in the above-stated time..... | 71 |
| Number of entrances at this port of American trans-atlantic steamers in same time..... | 56 |
| Difference in our favor, as respects estimate of freight and duties payable thereon..... | 15 |

The number of entrances, during the past four years, of our own steamers, stands thus:—

| | |
|---|---|
| Vessels of Ocean Steam Navigation Company..... | 33 |
| Vessels of Steam Navigation Company..... | 5 |
| Vessels of United States Mail Steamship Company..... | 18 |
| Total..... | 56 |

The American steamer bringing the largest amount of freight, and paying the highest duty, was the Franklin, on her return trip from Havre, January 16, 1851, when the

value of her imports was $1,263,649, and the duties thereon $311,878 50—the latter exceeding by $6,264 59 that paid on any Cunard steamer into Boston, and less by $16,265 35 (this only on one occasion) than by any Cunard steamer into New York. The exception here referred to was the steamer Africa, February 17, 1851.

Our extensive transactions with Havre and Bremen are to be accounted for as much, doubtless, on political grounds, as owing to the security and excellence of our vessels; at least this construction finds favor with a large class of merchants, for whose opinions we have the highest respect; but, passing on to the Liverpool shipments, and we find that even in a British port, where the national feeling naturally is to our prejudice, and our only rivalry English in its character, we have command of a fair proportion of the carrying trade, recent as the establishment of the Collins' line has been, and mighty as were the obstacles to be overcome. Gradually, too, the previous monopoly by the Cunard company, is yielding in a greater ratio; and unless causes intervene, which we do not anticipate, and can hardly conceive, we must, as a consequence of this competition, predicated on past experience, completely divide the business in a very few years. But to the figures:—

COMPARATIVE TABLE, EXHIBITING THE AMOUNT OF DUTIES PAID ON GOODS BROUGHT TO THIS PORT BY THE CUNARD AND COLLINS' STEAMERS RESPECTIVELY, ON A GIVEN NUMBER OF ENTRANCES, AND WITH A NEAR ASSIMILATION OF DATES:—

BY THE CUNARD LINE.

| Date. | | | Steamers. | Duties on Imports. |
|---|---|---|---|---|
| 1850.... | July | 5..... | Europa..... | $95,360 10 |
| .... | July | 22..... | America..... | 200,884 70 |
| .... | August | 3..... | Canada..... | 200,203 25 |
| .... | August | 30..... | America..... | 113,843 80 |
| .... | September | 21..... | Niagara..... | 125,972 85 |
| .... | October | 11..... | Europa..... | 59,530 80 |
| Total..... | | | ..... | $795,795 50 |

BY THE COLLINS' LINE.

| | | | | |
|---|---|---|---|---|
| 1850.... | Ju'y | 1 ..... | Pacific..... | $33 842 60 |
| .... | July | 21..... | Atlantic .. ..... | 89,028 60 |
| .... | August | 10..... | Pacific..... | 61,034 85 |
| .... | September | 2..... | Atlantic ..... | 47,326 25 |
| .... | September | 27..... | Pacific..... | 29,848 30 |
| .... | October | 9..... | Atlantic ..... | 29,659 00 |
| Total..... | | | ..... | $290,739 60 |

The above aggregate amounts exhibit a difference in favor of the Cunard steamers, of more than half a million of dollars, or in exact figures of $505,055 90. The average amount of duties paid by the Cunard steamers on each of these six trips is $132,632 50, on the Collins steamers $48,456 60. Difference in favor of the Cunard steamers $84,175 97. The duties paid by the freight of the one, nearly treble those of the other. But when we come to the current year, in which our American steamers, with the benefit of experience in their engineers and commanders, have sufficiently vindicated their qualities as to speed, we find a different result, which, in time, will, we hope, prove even more satisfactory. In this year, the average amount of duties paid on goods brought here by the Cunard steamers on each of the six trips of which we have any return, and embracing a period of four months, viz:—From January 18 to May 21, inclusive, is $169,718 31; the average amount of duties paid, the same period, on goods brought to this port by the Collins steamers in each of their six trips was $129,093 53.

The duties paid to within the latest dates specified in our tables on the entrance of our American trans-atlantic steamships, that is, four years, approaches to within two million and a half dollars of all the duties paid on goods imported by the CUNARD steamers into Boston for a period of eleven years; and as shown above, the CUNARD steamers, with the advantage of fifteen additional trips, exceed us only by something less than $500,000.

## THE LARGEST STEAMSHIP IN THE WORLD.

Messrs. C. Mare & Co., the shipbuilders of Blackwall, and Messrs. Penn, of Greenwich, England, engineers, have taken a contract to construct for the Peninsular and Oriental Steam Navigation Company an iron steamship, of the following dimensions and power, viz:—Length between the perpendiculars, 325 feet; breadth of beam, 43 feet; depth, 32 feet. She will measure about 3,000 tons, and will be propelled by four engines, of the collective working power of 1,200 horses; will have feathering paddle-wheels, and a guaranteed average speed of 14 knots, equal to 16 statute miles, per hour. Some idea may be formed of the size of this gigantic vessel when it is compared with that of some of the existing steamships most celebrated for their large size. She will be 51 feet longer than the Great Britain, 60 feet longer than the largest of the Cunard, or the American mail steamers, the Asia and Africa; 40 feet longer than the large steamers, such as the Parana, Oronoco, &c., now constructing for the Royal Mail Company, and 100 feet longer and 500 tons larger than the Caledonia, first rate, of 120 guns. She is the first of an improved class of steamships about to be constructed by the Peninsular and Oriental Company for the East India mail and passenger service, and it is confidently estimated that she will effect the passage between Southampton and Alexandria, a distance of 3,100 miles, in nine days. The passengers accommodation in these vessels is to be on the most spacious scale, and replete with every comfort and convenience.

## FACTS AND FIGURES ABOUT MASSACHUSETTS RAILROADS.

In the summer of 1835, the first year of travel on the Boston and Lowell Railroad, there were but two trains a day between Lowell and Boston. Now there are *eleven trains* a day—eight over the Boston and Lowell, and three over the new route via Wilmington. Just before the opening of this railroad, the "Middlesex Canal Packet Boat, Governor Sullivan, Captain S. Tyler," made daily trips between Lowell and Boston, "fare reduced to fifty cents!" Lowell passengers took the boat at Middlesex village. Sixteen years have wrought wonderful changes.

The Boston *Daily Advertiser* says:—"For the purpose of showing to what extent the whole people of the State participate in the benefit of the lines of railroad which traverse it, it may be pertinent to state that there are in Massachusetts thirty-two cities and towns which have each 5,000 inhabitants and upwards, and that one or more of these railroads pass through, or terminate in each of these towns, with the exception of Nantucket only, which is an island twenty miles removed from the main land; and that on each railroad two or more passenger trains run to and from Boston daily, Sundays excepted. There are in the State ninety-eight towns of a population varying from 2,000 to 5,000, of which seventy-three are situated on some one of the said lines of railroad, and have the same facilities of communication as the larger class of towns. Of the twenty-five towns of from 2,000 to 5,000 inhabitants, thirteen are seaport towns, mostly in the Old Colony, and a large proportion are situated near a railroad station in an adjoining town. The population of the smaller class of towns have the opportunities of railroad accommodation in nearly the same proportion as those of the class above mentioned."

The statistics of travel taken recently by the city police, and published by the celebration committee, though quite interesting, do not do full justice to the subject, from the fact that their count commenced at 6½ o'clock in the morning, and ended at 7½ P. M.

For the purpose of ascertaining the number of persons arriving and departing daily to and from the city of Boston, the city marshall so distributed the police as to enable him to make up an accurate list of all persons passing over the great thoroughfares leading to that city. The following is the statement of the arrivals and departures by railroad for one day:—

| | PASSENGER TRAINS OUT. | | | PASSENGER TRAINS IN. | | |
|---|---|---|---|---|---|---|
| | Trains. | Cars. | Passengers. | Trains. | Cars. | Passengers. |
| Lowell | 13 | 116 | 1,575 | 12 | 114 | 1,305 |
| Maine | 22 | 132 | 2.584 | 21 | 178 | 2,600 |
| Fitchburg | 22 | 148 | 2,123 | 22 | 146 | 1,952 |
| Eastern | 11 | 30 | 1,804 | 10 | 34 | 1,697 |
| Old Colony | 14 | 136 | 2,264 | 14 | 118 | 1,981 |
| Worcester | 22 | 192 | 2,580 | 21 | 178 | 2,367 |
| Providence | 16 | 111 | 1,946 | 16 | 122 | 1,670 |
| Total | 120 | 872 | 12,952 | 116 | 1,132 | 11,963 |

| | FREIGHT TRAINS OUT. | | | FREIGHT TRAINS IN. | | |
|---|---|---|---|---|---|---|
| | Trains. | Cars. | Passengers. | Trains. | Cars. | Pas'gers. |
| Lowell | 9 | 388 | 40 | 9 | 271 | 45 |
| Maine | 5 | 160 | 27 | 5 | 163 | 26 |
| Fitchburg | 7 | 172 | 50 | 9 | 207 | 52 |
| Eastern | 1 | 20 | 10 | 1 | 16 | 10 |
| Old Colony | 7 | 272 | 32 | 6 | 197 | 28 |
| Worcester | 5 | 186 | 30 | 5 | 150 | 30 |
| Providence | 4 | 134 | 118 | 4 | 134 | 117 |
| Total | 38 | 1,332 | 307 | 39 | 1,138 | 308 |

The whole number of railroad trains leaving the city was 158; arriving, 155. Total of arrivals and departures, 313. The number of passengers arriving by railroad was 12,291; departing, 13,259. Total of arrivals and departures of passengers, 25,539. Below we give the recapitulation of all the arrivals and departures of persons for the day:—

| | Went out. | Came in. |
|---|---|---|
| Per passenger trains | 12,952 | 11,963 |
| Per freight trains | 307 | 308 |
| Per vehicles | 15,964 | 14,942 |
| On foot | 12,887 | 14,310 |
| On horseback | 124 | 127 |
| With handcarts | 79 | 79 |
| Total persons | 42,313 | 41,729 |

The above may be taken, we presume, as a fair average of the daily arrivals and departures, both of railroad trains and persons.

## PROGRESS OF RAILWAYS IN THE UNITED STATES.

A correspondent of the *American Railway Times* furnishes a statement of the progress of railways in the United States from 1830 to 1851, which, with a correction or two, we here subjoin:—

| Years. | Miles. | Years. | Miles. | Years. | Miles. | Years. | Miles. |
|---|---|---|---|---|---|---|---|
| 1830 | 13 | 1836 | 839 | 1842 | 2,688 | 1847 | 4,369 |
| 1831 | 19 | 1837 | 1,155 | 1843 | 2,965 | 1848 | 4,574 |
| 1832 | 176 | 1838 | 1,389 | 1844 | 3,474 | 1849 | 5,583 |
| 1833 | 305 | 1839 | 1,986 | 1845 | 3,518 | 1850 | 6,783 |
| 1834 | 456 | 1840 | 2,226 | 1846 | 3,885 | 1851 | 11,471 |
| 1835 | 542 | 1841 | 2,505 | | | | |

The Baltimore and Ohio Railway was opened a distance of 13 miles, December 28, 1829; the South Carolina Railway, a distance of 6 miles, November 1, 1830; the Lake Ponchartrain, April 16th; the Camden and Amboy, a distance of 7 miles, July 1st; and the Mohawk and Hudson, throughout, September 24th, 1831.

It is difficult to prepare a table, which, when published, will give the precise number of miles of railways in operation, as every day adds to the number, and swells the grand total of miles completed or in operation.

## "THE AMERICAN RAILWAY GUIDE."

This is the most complete and convenient manual for the traveler by railway and steamboat that has ever been published in the United States. It contains carefully prepared and correct tables for time of starting from all stations, distances, fares, etc., on all the railway lines in the United States, together with a complete railway map. The principal steamboat and stage lines running in connection with railroads, are also embraced in its admirably classified tables. It is for the traveler in every State of the Union, what Snow and Wilder's "*Pathfinder Railway Guide*" is for New England, and Bradshaws' for Old England—a perfect manual of its kind.

# JOURNAL OF MINING AND MANUFACTURES.

## PIN MANUFACTURE IN THE UNITED STATES.

During the war of 1812, in consequence of the suspension of importations, pins became very scarce. The prices asked for the few in the market, were many times the original cost—in some instances as high as a dollar a paper, by the pack. About this time an effort was made to introduce the manufacture in New York. Some pin makers came from England, bringing the necessary implements, and commenced the business at the old States Prison at Greenwich, (New York,) employing the labor of the convicts. I think the establishment belonged to, or was managed by a man named Haynes. How much was done, I am not informed; but the low prices which prevailed very soon after the termination of the war, were fatal to the enterprise, and it was abandoned. In the year 1820, Richard Turman obtained the tools which had been used by Haynes. He made a contract for pauper labor, and undertook the manufacture in the Alms-House at Bellevue. Mr. Turman carried on the business a year or two, when he died; having lost by the undertaking a considerable share of his property. Probably the trouble and perplexity of the business, together with the confinement consequent on attending to it, hastened his end. No further use was ever made of the tools. I recollect hearing Mr. Turman say at this time, that he had seen a *machine* for making pins, that it had made pins, but was too delicate, or intricate to be used with advantage. I suppose this machine was one which was invented and patented by Moses L. Morse, of Boston, during the war. I think Morse's machine had been worked to some small extent at that time, but it had passed into other hands, and was never used afterwards. His specification showed him to have been a man of good mechanical talents.

Lemuel William Wright, of Massachusetts, patented a machine for making "*solid-headed pins*," both in the United States, and in England, at an early period. I believe his specification and drawings are published in the London "Repository or Arts." He never attemped to put it to use in the United States, but in London he formed a company with a large capital, for the purpose of operating with it. The company built a large stone factory in Lambeth, and constructed some sixty machines, at great expense. It is understood that the machines failed in pointing the pins, and for that reason never could be put into successful operation. To obviate this difficulty, Wright invented a machine for heading the shanks, pointed and cut in the ordinary way by hand. The company did not succeed, and broke up with the loss of a great part of the investment. D. F. Taylor, who had been ruined by this failure, afterwards came in possession of the machinery, and, by connecting himself with a capitalist, under the firm of D. F. Taylor & Co., was enabled to start a manufactory of "solid-headed pins" at Stroud, in Gloucestershire. This was in 1832, or 1833. Some pins of their make even sold as early as 1833; which were the first "solid-headed" pins ever sold in any market. They obtained a patent for the "solid-headed" pin by act of Parliament. They used (principally or solely) the machine for heading only. Some account of Wright's machine is given in Mr. Babbage's work on the "Economy of Manufactures."

In 1832, a patent for a pin machine was obtained for the United States, by John J. Howe, and in 1833 and '34, patents for the same invention were obtained for England and France. This machine was designed to make pins similar to the English diamond pins, the heads being formed of a coil of small wire fastened upon the shand by pressure between dies. No arrangement was made to use this invention in Europe; but in December, 1835, the Howe Manufacturing Company, was formed in New York, for the purpose of putting it in operation. This company removed to Birmingham, (Derby,) Connecticut, where its manufacturing operations are now carried on. In the spring of 1838, a second patent for the United States, was obtained by John J. Howe, for a machine for making "solid-headed" pins in 1840, and this is the machine which is now in use, by the Howe Manufacturing Company.

Samuel Slocum, of Rhode Island, obtained a patent in England, for a machine to make "solid-headed" pins in 1835. His invention was not put to use in England; but he established the manufacture of pins, by means of it, in Poughkeepsie, in 1838, under the firm of Slocum, Gillison & Co. His machine has not been patented in the United States, but has been, as it still is, run in secret. At this period, and till the

Tariff of 1842 came into operation, pins (under the "Compromise Act,") were free of duty; while brass wire of which they are made, was subject to a duty of 20 to 25 per cent. Under this discouragement, the business made but slow progress. But under the encouragement given by the tariff of 1842, the two companies above named, went on increasing their production, and doing a profitable business, till 1846. In the meantime, it having been found that pins *could* be successfully manufactured by machinery —and exaggerated ideas both as to the extent of the business and the profits to be made in it, having obtained extensive prevalence,—many persons in different parts of the country, being engaged in scheming on machinery for making pins, and much capital was expended, and finally sunk in these projects. These attempts were attended with various degrees of success; in a few instances a good article was produced, but in most cases, the article produced was more or less inferior in quality. The consequence was, that at this time, within but a few years after the manufacture had been commenced, and before it was fairly established, (at least on its present basis,) the market was overstocked with goods, importations were nearly or quite arrested, and the business was ruined by domestic competition. This depression continued about two years, from 1846 to '48, and during this period, nearly every party engaged in the manufacture, or attempting to engage in it, excepting the two companies before named, suspended operations. Slocum, Gillison & Co., sold out their establishment to the "American Pin Company," of Waterbury, Connecticut, and the machinery was removed from Poughkeepsie to Waterbury, where it is now used by the last named Company.

The "American Pin Company," and the "Howe Manufacturing Company," now manufacture nearly all the pins consumed in the United States. There is a party at Poughkeepsie doing a limited business, and a suall amount imported. Since the depression of 1846 to 1848, the business at the two companies named, has been reasonably profitable, having been rendered so rather by reducing the cost of production and the expense of selling, than by the small advance in price which has been realized. Both companies manufacture the wire for making their pins. During the last year, the two companies have used principally Lake Superior copper, for making their wire; their joint consumption of copper, amounting to about 250 tons, per annum. The present weekly production of pins by the two companies, may be stated at about eight tons.

In connection with the improvement effected in the manufacture of pins, by the introduction of self-acting machinery, superseding a process which formerly required six or seven different manual operations, important improvements have been made in the method of sheeting the pins, or sticking them on paper. This, as previously preformed, by inserting a few pines at a time by hand, was a tedious process, at which some five or six doxen papers were as many as a good hand could do in a day. By the improved machinery now in use, one hand will stick from 75 to 125 dozen a day, and do the work better than it was usually done in the old way. There are three patents now in force for improvements in the machines in use for this operation, namely: one granted to Samuel Slocum, one to De Grass Fowler, and one to John J. Howe. These patents are held jointly by the "Howe Manufacturing Company," and the "American Pin Company."

The present price of American solid-headed pins, is believed not to exceed two-thirds of the lowest price at which imported pins of equal weight were ever afforded before the manufacture was introduced, and for service, they are undoubtedly better than the article of which they have taken the place.

The American improvements in both the pin making and pin sticking machinery have been for several years in operation in England, and probably in other parts of Europe.

## THE COST OF MAKING COTTON SHEETING.

The Cannelton Indiana *Economist*, a journal conducted with signal ability, and devoted to the manufacturing and industrial interests of the West, publishes the subjoined tabular statements of the cost of raw cotton in each yard of sheeting, and also the cost of making one yard of sheeting, &c. We have no practical knowledge of the subject, and therefore, must rely entirely on the statements of the *Economists'* correspondent, and the endorsement of the editors of that print for the accuracy of the tables. If correct, however, they will be useful for reference to those interested in cotton mills, and interesting, in connection with several communications and papers on the

same subject, which have appeared in former numbers of the *Merchants' Magazine.* In reference to the following tables, the editor of the *Economist* says:—

"Instead of reckoning insurace and commissions under the item of cost of manufacture, he makes a deduction of 10 per cent. This is probably a fair allowance; the commissions for sales and guaranty are 5 per cent; the goods are sold at six months credit, making 3 per cent; and this per cent would cover insurance and incidentals. It will be borne in mind, that six cents a pound for manufacture is a very high figure, even for an old New England mill."

TABLE SHOWING THE COST OF RAW COTTON IN EACH YARD OF SHEETING, WEIGHING 2.80 YARDS TO THE POUND, ALLOWING 10 PER CENT FOR LOSS IN MANUFACTURE, AT FROM SIX CENTS PER POUND, INCREASED BY ONE-QUARTER CENT, TO THIRTEEN CENTS PER POUND, EXTENDED TO ONE-TEN-MILLIONTH PART OF A CENT OF COST. EACH YARD WILL CONTAIN OF UNCLEANED COTTON .3968254 POUNDS:—

| Cotton at | Cents. | Cotton at | Cents. |
|---|---|---|---|
| 6 cents will cost ..... | 2.3809524 | 9¾ cents will cost ..... | 3.8690476 |
| 6¼ " " ..... | 2.4801587 | 10 " " ..... | 3.9682540 |
| 6½ " " ..... | 2.5793650 | 10¼ " " ..... | 4.0674603 |
| 6¾ " " ..... | 2.6785713 | 10½ " " ..... | 4.1666666 |
| 7 " " ..... | 2.7777778 | 10¾ " " ..... | 4.2658730 |
| 7¼ " " ..... | 2.8769841 | 11 " " ..... | 4.3650794 |
| 7½ " " ..... | 2.9761905 | 11¼ " " ..... | 4.4642857 |
| 7¾ " " ..... | 3.0753968 | 11½ " " ..... | 4.5634920 |
| 8 " " ..... | 3.1746032 | 11¾ " " ..... | 4.6626984 |
| 8¼ " " ..... | 3.2738095 | 12 " " ..... | 4.7619048 |
| 8½ " " ..... | 3.3730159 | 12¼ " " ..... | 4.8611111 |
| 8¾ " " ..... | 3.4722222 | 12½ " " ..... | 4.9603174 |
| 9 " " ..... | 3.5714286 | 12¾ " " ..... | 5.0595238 |
| 9¼ " " ..... | 3.6706349 | 13 " " ..... | 5.1587302 |
| 9½ " " ..... | 3.7698412 | | |

TABLE SHOWING THE COST OF MAKING ONE YARD OF SHEETING 2.80 TO THE POUND EXCLUSIVE OF THE COST OF COTTON, WHEN THE MANUFACTURE COSTS PER POUND FROM 4 CENTS TO 6¾ TO THE SAME DECIMAL. EACH YARD, 2.80 TO THE POUND, WILL WEIGH, .3571429 POUNDS:—

| | Cents. | | Cents. |
|---|---|---|---|
| At 4 cents per lb. for making | 1.4285716 | At 5⅓ cents per lb. for making | 1.9642859 |
| 4¼ " " | 1.5178573 | 5¾ " " | 2.0535716 |
| 4½ " " | 1.6071430 | 6 " " | 2.1428574 |
| 4¾ " " | 1.6964287 | 6¼ " " | 2.2321431 |
| 5 " " | 1.7857145 | 6½ " " | 2.3214288 |
| 5¼ " " | 1.8750002 | 6¾ " " | 2.4107145 |

| | |
|---|---|
| 372 looms, 40 yards each per day, will make.....yards per day | 14,880 |
| In 1 year of 300 days will yield.....yards per year | 4,464,000 |
| Each day will produce of goods weighing 2.80 yards to the pound pounds of sheeting..... | 5,314.286 |
| To which add 1-9th for 10 per cent waste in raw cotton, it will require.....pounds of raw cotton per day | 5,904.762 |
| 300 days will consume about 3,936 bales raw cotton, or 328 bales per month, of 450 lbs. each, or in pounds per year..... | 1,771,428 |

Allowing 10 per cent for commission, interest, &c., and off the sale price.

| Labor. *Cts.* | Cotton. *Cts.* | Goods. *Cts.* | Profit. *Cts. per yd.* | Per annum. | Per cent on $125,000. |
|---|---|---|---|---|---|
| 5½ | 6¼ | 6¼ | 1.0813491 | $48,271 42 | 14.85 |
| 6 | 6¼ | 6¼ | 0.9027776 | 40,299 99 | 12.40 |
| 6 | 6½ | 6½ | 1.1277776 | 50,343 99 | 15.49 |
| 6 | 7 | 6½ | 0.9293748 | 41,487 29 | 12.76 |
| 6 | 7½ | 6½ | 0.7309521 | 32,629 70 | 10.04 |
| 6 | 8 | 6½ | 9.5335394 | 23,816 19 | 7.32 |
| 6 | 8½ | 6½ | 0.3341267 | 14,915 41 | 4.59 |
| 6 | 9 | 6½ | 0.1357140 | 6,059 27 | 1.86 |
| 6 | 9½ | 6½ | 0.0365077 | 1,629 70 | 0.5 |
| 4 | 6½ | 6½ | 1.8420634 | 82,229 71 | 22.22 |

## COAL TRADE OF SCHUYLKILL, PENNSYLVANIA.

We are indebted to the *Miner's Journal*, published at Pottsville, Pa., for the subjoined table showing the capital invested, wages paid, annual product, &c., in the region of Schuylkill County alone. It does not include any real estate, except, perhaps, that of the Delaware Coal Company. These statistics are based on the situation of the collieries, product, expenditures, &c., for the year ending June 30, 1850:—

| Coal operators. | Capital invested. | Mon'ly wages. | Annual product. | Value. |
|---|---|---|---|---|
| **POTTSVILLE.** | | | | |
| Thomas Miles & Co. | $20,000 | $1,600 | $18,000 | $37,000 |
| **NORWEGIAN TOWNSHIP.** | | | | |
| George H. Potts | 63,147 | 3,750 | 39,285 | 66,784 |
| George Spencer & Co. | 30,000 | 1,560 | 20,000 | 40,000 |
| George Rich. | 6,000 | 1,000 | 15,000 | 30,000 |
| Jonathan Wasley | 40,000 | 1,700 | 22,000 | 33,000 |
| James McKown | 2,500 | 300 | 4,000 | 7,800 |
| Delaware Coal Company | 500,000 | 4,760 | 50,000 | 75,000 |
| **MINERSVILLE.** | | | | |
| Philip Jonec. | 1,000 | 400 | 6,000 | 12,000 |
| Joseph F. Taylor | 2,000 | 450 | 4,000 | 8,000 |
| **CASS TOWNSHIP.** | | | | |
| George & William Payne | 80,000 | 5,000 | 60,000 | 120,000 |
| Charles M. Hill | 10,000 | 1,200 | 15,000 | 28,000 |
| John Reese | 700 | 240 | 1,800 | 3,500 |
| Jones & Evans | 10,000 | 1,000 | 10,000 | 20,900 |
| M. P. & G. Heilner | 210,000 | 16,000 | 131,000 | 212,000 |
| Gideon Bast & Co. | 40,000 | 3,000 | 30,000 | 86,000 |
| Jacob Serrill | 5,000 | 650 | 11,000 | 16,000 |
| James C. Oliver | 8,000 | 400 | 2,000 | 3,600 |
| George Spencer & Co. | 30,000 | 1,500 | 20,000 | 40,000 |
| William Morris | 12,000 | 400 | 7,000 | 10,000 |
| William & Charles Britton. | 9,000 | 600 | 11,500 | 19,000 |
| Dolbin & Rogers | 7,000 | 900 | 9,500 | 15,200 |
| William Petherick | 20,000 | 4,500 | 3,600 | 57,500 |
| Richard Hecksher | 60,000 | 8,000 | 63,000 | 100,800 |
| Johanna Cockill | 6,000 | 600 | 7,000 | 12,200 |
| Joseph F. Taylor. | 5,000 | 650 | 11,000 | 14,000 |
| **BLYTHE TOWNSHIP.** | | | | |
| Joseph Whitfield | 25,000 | 1,000 | 16,000 | 23,000 |
| Rogers, Sinickson & Co. | 60,000 | 6,000 | 60,000 | 120,000 |
| John Williams | 2,000 | 450 | 5,000 | 6,500 |
| Thomas Pollard | 1,000 | 250 | 2,000 | 2,900 |
| Thomas Williams | 1,000 | 450 | 3,300 | 5,200 |
| A. Steinberger | 28,000 | 2,200 | 25,000 | 43,000 |
| Collahan & Hanon | 6,000 | 6 800 | 8,000 | 14,000 |
| Elijah Dodson | 4,000 | 450 | 4,000 | 6,500 |
| Sager Chadwick | 25,000 | 800 | 10,000 | 16,000 |
| James C. Oliver | 10,000 | 800 | 9,000 | 13,500 |
| Denison, Bowman & Co. | 14,000 | 1,200 | 12,000 | 17,000 |
| James Neal | 28,000 | 1,000 | 13,000 | 19,000 |
| John Tucker | 20,000 | 800 | 8,000 | 14,000 |
| J. & B. Quigley | 1,000 | 200 | 2,000 | 3,600 |
| Conner, Rhodes & Co. | 15,000 | 1,200 | 15,000 | 26,500 |
| William Williams | 1,000 | 240 | 2,500 | 4,400 |
| B. N. Titus & Co. | 6,000 | 600 | 8,000 | 15,500 |
| Henry Guiterman & Co. | 12,000 | 800 | 8,000 | 13,600 |
| Sillyman & Reed | 13,000 | 800 | 7,000 | 14,000 |
| James Penman | 3,000 | 700 | 7,000 | 9,100 |
| William Williams | 1,200 | 600 | 4,000 | 7,800 |

| Coal operators. | Capital invested. | Mon'ly wages. | Annual product. | Value. |
|---|---|---|---|---|
| **NORTH CASTLE TOWNSHIP.** | | | | |
| Wood & Moore | 1,000 | 175 | 780 | 1,400 |
| Isaac W. Richardson | 4,000 | 350 | 3,200 | 5,100 |
| Steel & Wood | 4,500 | 300 | 3,000 | 4,800 |
| Joseph G. Lawton | 50,000 | 2,700 | 25,000 | 37,000 |
| William & Thomas John | 40,000 | 3,800 | 40,000 | 64,000 |
| John Hornless | 3,000 | 300 | 20,000 | 3,500 |
| Adams & Miller | 60,000 | 2,000 | 40,000 | 60,000 |
| David Brown & Co. | 40,000 | 2,000 | 14,000 | 28,000 |
| Daniel Edwards | 6,000 | 600 | 10,000 | 16,000 |
| Smith & Glenn | 1,000 | 180 | 1,250 | 2,200 |
| Samuel Sillyman | 50,000 | 2,000 | 30,000 | 46,000 |
| Walker, Frantz & Co | 1,000 | 80 | 670 | 1,100 |
| Francis J. Parvin | 10,000 | 1,000 | 12,400 | 19,800 |
| Price & Hughes | 1,000 | 100 | 960 | 1,600 |
| Milnes, Haywood & Co | 100,000 | 4,000 | 46,879 | 70,000 |
| John Pinkerton | 25,000 | 3,500 | 42,000 | 84,000 |
| Kelly & Fogerty | 13,000 | 1,600 | 19,200 | 28,800 |
| Sillyman & Fister | 15,000 | 1,600 | 19,300 | 29,000 |
| David Chillas | 5,000 | 180 | 1,675 | 2,600 |
| Lewis Dougherty | 14,060 | 750 | 11,000 | 14,000 |
| Charles Miller | 60,000 | 2,000 | 40,000 | 64,000 |
| **EAST NORWEGIAN TOWNSHIP.** | | | | |
| Capewell, Dovey & Co. | 10,000 | 1,500 | 12,600 | 21,500 |
| William Y. Egard & Co. | 60,000 | 2,500 | 20,000 | 38,000 |
| Winterstein & Headly | 5,000 | 400 | 5,300 | 8,000 |
| Haywood & Co | 20,000 | 1,400 | 15,250 | 24,300 |
| T. & W. Pollock | 10,000 | 1,000 | 13,200 | 31,000 |
| John G. Hughes | 50,000 | 1,200 | 12,000 | 28,500 |
| James Berry | 1,000 | 180 | 2,000 | 2,900 |
| **TAMAQUA.** | | | | |
| J. & R. Carter | 13,000 | 4,500 | 75,000 | 102,500 |
| Heaton & Carter | 5,500 | 600 | 8,400 | 126,000 |
| R. Ratcliff & Co | 10,000 | 1,400 | 20,000 | 30,000 |
| William Donaldson | 3,000 | 1,200 | 20,000 | 30,000 |
| James Taggert | 6,000 | 1,800 | 14,000 | 21,000 |
| **SCHUYLKILL TOWNSHIP.** | | | | |
| Charles Bennett | 4,500 | 332 | 6,000 | 9,000 |
| William Cooper | 20,000 | 1,300 | 18,000 | 27,000 |
| John Tucker | 30,000 | 1,950 | 28,000 | 37,500 |
| C. Sillyman & Co. | 16,000 | 1,600 | 26,000 | 39,000 |
| George H. Potts | 51,315 | 2,028 | 20,000 | 87,500 |
| Wiggan & Co. | 5,000 | 160 | 3,000 | 4,800 |
| Jones, Berbeck & Co. | 7,000 | 1,400 | 18,000 | 27,000 |
| **FRAILEY TOWNSHIP.** | | | | |
| Colt, Gaskin & Lomison | 35,000 | 1,750 | 30,000 | 45,000 |
| McCormick & Clark | 1,000 | 437 | 8,000 | 16,000 |
| Molly & Smith | 5,000 | 437 | 4,000 | 12,000 |
| **TREMONT TOWNSHIP.** | | | | |
| Levi S. Spangler | 10,000 | 667 | 21,000 | 42,000 |
| Henry Eckel | 17,000 | 1,667 | 30,000 | 60,000 |
| **PINEGROVE TOWNSHIP.** | | | | |
| David Greenawalt | 5,000 | 400 | 7,000 | 14,000 |
| John Kitzmiller | 16,000 | 1,040 | 23,000 | 42,000 |
| Caleb Wheeler | 6,000 | 584 | 7,000 | 14,000 |
| Total | $2,527,862 | $149,813 | $1,598,549 | $2,876,784 |

Total number of hands employed..... 6,541

After throwing off all the expenditures made by incorporated coal and improvement companies, embraced in the above table, it will be seen that the investments made by individuals engaged in the trade is nearly *three millions of dollars.*

## GOLD QUARTZ MINING IN CALIFORNIA.

The following statement in regard to the quartz mining operations in California is published in late California papers :—

"The numerous discoveries of auriferous quarts which have been made in all directions throughout the length and breadth of this favored land, must force conviction upon the mind, even of the most skeptical, that the amount of gold in California may with perfect truth be pronounced inexhaustible, and that for ages to come this State will possess within her own boundaries a permanent source of wealth beyond the wildest dream of the gold-seeker's imagination. Men whose knowledge on this subject is acquired only by hearsay, and the information obtained by a residence in our cities, can form but crude ideas of the actual reality. When they have visited the quartz regions and have examined for themselves,—not with railroad speed and a cursory glance—not satisfied with being shown some rich dazzling specimens, which excite their wonder and admiration, but wisely spending a few weeks in observing the quantity and quality of the various descriptions of gold-bearing quartz, and afterwards making a calculation of the products of even one ledge or vein sufficiently extensive to induce the erection of proper machinery—then will they begin to realize the fact that all the gold which has been already taken from the different bars, ravines, gulches, canons, flats, river banks and river beds, coyote diggings, &c., are but as gleanings from a plenteous harvest field, compared with those countless millions which the sure, though slower process of rock-crushing and amalgamating, will yet extract from the mountains and hills of California. Heretofore the operations in quartz mining have been generally regarded either as the schemes of speculators or the visionary creations of some excited imagination. Gradually, however, these matters are beginning to be better understood, and no longer to be looked upon with distrust or suspicion. Confidence now takes the place of doubt, and capital is seeking investment in that which, if properly and honestly managed, will prove the most valuable of all stock.

One great desideratum still remains to be obtained, namely, some process by which the very fine gold can be saved. At present the loss varies from 12 to as high as 75 per cent, according to the description of machinery used. Men's minds are reflecting on this subject not only here but throughout the States, and we shall not be surprised to find a method discovered by an ingenious Yankee in some remote New England village, which will answer all the purposes required, and perhaps be as remarkable for its simplicity and cheapness as it will be useful and important to the mining population."

## PRODUCTION AND CONSUMPTION OF COTTON.

The following statement of the produce and consumption of cotton has been put forth, in connection with a call for a convention of the cotton-planters to Macon, Georgia, on the 27th of October, 1851 :—

| Average from | Production. | Average from | Consumption. |
|---|---|---|---|
| 1825 to 1830.....bales | 1,231,000 | 1825 to 1830.....bales | 1,187,000 |
| 1830 to 1835..... | 1,450,000 | 1830 to 1835..... | 1,540,000 |
| 1835 to 1840..... | 1,909,000 | 1835 to 1840..... | 1,943,000 |
| 1840 to 1845..... | 2,561,000 | 1840 to 1845..... | 2,414,000 |
| 1845 to 1850..... | 2,791,000 | 1845 to 1850..... | 2,869,000 |
| Total..... | 9,952,000 | Total..... | 9,953,000 |

## PUTNAM'S SPRING BEDSTEAD.

Our readers will bear testimony to the fact, that we are not in the habit of indiscriminately commending every new article of American or foreign production. Indeed, we have been rather chary of bestowing praise, in some instances, when we have thought it was well deserved, to avoid the imputation of using the influence we may possess, as the conductor of a "fact and figure" work like the *Merchants' Magazine.*

to promote the private interests of an individual. But these considerations will not deter us from commending an article of so much real value and comfort, as that introduced to the people of the United States, by Mr. John Putnam, in the shape of a Spring Bedstead. This bedstead we know, from several months personal experience, possesses advantages over any other article of a similar kind, that we have ever seen. Simple in its construction, it combines cheapness, durability, and elegance, with a luxuriousness of ease, which, if we are not greatly mistaken, is unsurpassed by anything of the kind now is use.

# MERCANTILE MISCELLANIES.

## NOTE TO OUR COMMERCIAL CHRONICLE AND REVIEW.

Foreign merchandise continues to sell at very low rates, and most European fabrics can be purchased in all of our principal cities at a considerable depreciation from the cost of importation. This is no doubt owing to the oversupply which has been poured into the country for the last eighteen months, far beyond the wants of the trade. This evil, however, will cure itself, and the remedy may safely be left to individual judgment. Few of our importers will long continue a losing business, and the demand will regulate the supply. The past year has witnessed many great changes in the business relations of our country, and there are indications that the future has in store for us something still more wonderful. So many new elements have entered into the calculations of Commerce, that it is not safe to predict what is before us. California is now pouring her golden sands into our treasuries at the rate of nearly five millions of dollars per month; and this alone is sufficient to unsettle old habits of trade, and turn the enterprise of business men into new channels. Principles of truth are eternal, and should never be changed; but old usages and customs are less important, and should never be too strenuously clung to, if we would not be left behind in the progress of the age.

## THE CULTIVATION OF THE TEA PLANT.

We take the liberty of publishing the letter of our friend and correspondent, JUNIUS SMITH, LL. D., which contains some interesting information relating to that gentleman's experience in the cultivation of the Tea Plant at Greenville, S. C., which in connection with previous statements from the same reliable source, leaves on our mind no doubt of the complete eventual success of the enterprise.

GREENVILLE, S. C., Sept., 23, 1851.

FREEMAN HUNT, Esq., *New York*:—

DEAR SIR:—The Post-office here charges 10 cents for the *Merchants' Magazine*, which is, I suppose, double what it ought to be.* You must know I would thank you to pay the postage by the quarter, or any other way, and let me know the amount, and I will refund it.

You are aware that we have had a very dry and thirsty time here this summer, and that vegetation has suffered greatly in consequence. My system of irrigation for the Tea Plantation was not complete, and the *Tea Plants*, most exposed, perished in consequence. I lost but few, but I cannot well afford to lose one. The increase is slow, but sure. The larger and more mature plants are now covered with blossom buds, many of which are just ready to burst into blossom. These plants have my constant

* Mr. Smith's allusion to the extortion of the post-master of Greenville affords another illustration of the workings of one of the most unexplainable and ridiculous laws (we mean the misnamed cheap postage act of 1850) that ever emanated from an intelligent body of legislators, and we respectfully request Post-Master General Hall to make another attempt to explain the act, which report says he had the honor of drafting. For the information, however, of the post-master at Greenville, we will state, that the postage on the *Merchants' Magazine* is nine cents per quarter (that is, for three monthly numbers) if paid by Mr. Smith quarterly in advance. According to the act of Congress, or Mr. Hall, the postage must be paid quarterly in advance by the subscriber, in order to secure the discount of 50 per cent from the exorbitant rates charged upon a single number. Under the previous act the rate was uniform, and a single number of the *Merchants' Magazine* could be sent 3,500 miles for 7½ cents, under the present act it costs 30 cents for the same distance.—*Ed. Mer. Mag.*

attention, both as regards irrigation and manuring. Perhaps there is no plant that dreads drought more than the tea plant. It almost seems as if water was its life—many of my tea nuts perished by the drought. One bed planted upon a wet soil of blue clay, has germinated well, and the fine healthy seedlings are now eight or ten inches in height, with fourteen or fifteen leaves; I have not lost but one of them. That was struck by the heat of the sun before I had shaded it. The older plants require no other attention than feeding and watering, and now stand the frosts of winter, and the heats of summer.

I have just received from China, my annual supply of tea nuts. More than half of the nuts perished in transportation, but, notwithstanding, I shall continue to furnish moderate quantities, of these fresh, this year's nuts for autumnal planting. Having planted every month for the last year, the result shows that a larger proportion of the nuts planted in the autumn germinate in the spring and summer than of those planted at any other season of the year, and yet the first planted here in June, 1850, were the first to germinate early in the autumn following. Most of these dry foreign nuts remain from nine to twelve months in the ground before they germinate, if they vegitate at all. I apprehend that many nuts have been sacrificed through the want of patience. I am now preparing to replant where the nuts failed the last year. We find the Indian corn and the wheat and the turnips, and all kinds of vegetables fail more or less when sown, and why should we expect the tea nut to be an exception to the general course of God's horticultural administration? It is man's duty to plant, and Heaven's prerogative to give or withhold the increase. I can remember when there was not a bale of cotton grown in the United States. Millions of people well remember when there was not a pound of tea grown, and no expectation of one. It is the slowest and least unlikely beginnings which lead to the greatest results. I can remember when there was not a steam-ship floating upon the ocean, and I can remember too when the Solomons of this world called me a fool and a blockhead, for advocating the practicability of Atlantic Steam Navigation, and for devoting six years' labor in introducing and establishing such a foolish scheme. I can now, from my little farmer's cottage, look back with unmingled delight to the six years' intense labor devoted to that enterprise, and read the result in every newspaper of the Union. I do not mean to say that such will be the result of the tea undertaking, but I can see no reason why it should not. I feel that Providence has led on the way in a most marvelous and unexpected development, and believe that His guiding hand will sustain in his own way his own great work.

I am expecting two cases of tea plants from Calcutta, advices of which have been some time in hand, but I do not place much confidence in their sound arrival, as I have not had but one case that came in a living condition. The importance of such an increase, and such a diversity of tea plants, can hardly be appreciated.

Your obedient servant, JUNIUS SMITH.

## AMERICAN GEOGRAPHICAL AND STATISTICAL SOCIETY.

This Society was established on the 9th of October, 1851, by the adoption of a Constitution, and the election of suitable officers to manage its affairs. The society is constituted for the collection and diffusion of geographical and statistical information. By the constitution, the society is to consist of ordinary, corresponding, and honorary members. The officers of the society are a President, four Vice-Presidents, Recording Secretary, Foreign and Domestic Secretaries, and a Treasurer. An Executive Committee, of nine members, are to be chosen annually by ballot, to whom all the business of the society is to be referred, for their judgment, decision, and control during the year, except when the society is actually in session, or shall otherwise determine. The officers of the society are members of the Executive Committee, in addition to those chosen. Five members of the committee constitute a quorum for the transaction of business. Persons of good standing and character are admitted members of the society by a majority of ballots. The initiation fee is fixed at $10, and the annual subscription at $5. Any member of the society may withdraw on giving notice to the Secretary, and paying all arrears due, including the subscription for the year then current, and no persons will be considered entitled to the privileges of membership whose subscription shall remain unpaid six months after he has been called on for payment. The constitution provides for anniversary, special, and ordinary meetings. Anniversary meetings are to be held on the second Thursday of December in each year, and ordinary meetings on the second Thursday of March, June, September, and December. Special

meetings may at any time be called by the Executive Committee, or by the President, whenever requested by ten members of the society. Honorary and corresponding members are to be first proposed for admission by the Executive Committee, and elected in the same manner as ordinary members. The society may, from time to time, under the superintendence of the officers or Executive Committee, publish its transactions, with maps and illustrations. The society may also possess a library, with a collection of maps, charts, and instruments connected with geographical and statistical science, to which all members shall have access, and strangers, under such restrictions as may be deemed necessary by the Executive Committee. All donations to the library are to be recorded in its transactions. All funds of the society are to be kept by the Treasurer, who will pay out no money but by order of the Executive Committee.

The constitution may be altered and amended at any annual meeting, by a majority of the votes of the members present. The following gentlemen were elected the first officers of the society in the month of October, namely:—

Henry Grinnell, Esq., *President.*

Joshua Leavitt, Henry E. Pierrepont, Archibald Russell, Freeman Hunt, *Vice-Presidents.*

Charles Congdon, *Treasurer.*

Charles A. Dana, *Recording Secretary.*

S. Dewitt Bloodgood, *Foreign Corresponding Secretary.*

John Disturnell, *Domestic Corresponding Secretary and Agent.*

Alexander I. Cotheal, J. Calvin Smith, Lewis Gregory, Hiram Barney, Luther B. Wyman, George P. Putnam, Henry J. Raymond, M. Paul Arpin, M. Dudley Bean, *Executive Committee.*

The society at present occupies the *Geographical and Statistical Rooms* of Mr. John Disturnell, 179 Broadway, New York. No society that we are acquainted with has ever started under more favorable auspices, and the general intelligence of its officers and present list of members, are a guarantee that its objects will be prosecuted with efficiency, and in a liberal and enlightened spirit.

## UNIVERSITY OF THE CITY OF NEW YORK.

### MERCANTILE STUDY A BRANCH OF UNIVERSITY EDUCATION.

If the true university of modern times (according to Thomas Carlyle) be a collection of books, it is plain, that the true system of university study must be that which, while it preserves the degree of discipline and control which a *system* implies, allows a wide range of choice of studies, according to the tastes and wants of individuals, and the line of life they intend to pursue. The old system, especially in America, has not allowed this range of choice. For the three professions, law, medicine, and divinity, our colleges furnishes a good preparatory course. But there are other professions, other pursuits, requiring a thorough preparation, by liberal study, and mental discipline. There is the engineer, the chemist, the scientific agriculturist, the merchant. The advance of modern discovery, the growth of modern ideas, has made the pursuits of all these scientific. To the science and literature of the mercantile profession, the Merchants' Magazine, we flatter ourselves, has made some contributions, during the past twelve years. It has, above all, awakened and directed attention to the fact, that trade is something more than a simple process of money-making, to which the most ignorant clerk, who has gone through the routine of a counting-house, is equal. Let us count up the branches of knowledge, of liberal study, which interests the mercantile professon: Geography, Political Economy, Moral Philosophy, the Modern Languages. Can the mercantile student omit one of these? can he study one of these without direct advantage in his future pursuits?

We rejoice, therefore, to see, by the circular of the Faculty of Science and Letters, of the University of the City of New York, that they have introduced, into that institution, the voluntary system, as it is sometimes called, a system somewhat resembling that pursued at the continental universities. A student may now select those branches of study which suit his individual tastes and views in life. "To meet a great want," says the circular, "especially in this community, by giving more scope for individual selection among the studies, yet without violating any principle consecrated in the usage of the republic of letters, and thus the more perfectly to accomplish what has always been a part of the system of this institution, the Faculty have modified and greatly enlarged the course of studies, by providing for instruction in the modern

languages and literature equally with the ancient, and by increasing the amount of instruction in English literature, in the historical course, and in the cognate political sciences."

The student has five departments from which to make his choice: Ancient Languages and Literature, Modern Languages and Literature, Mathematics and Natural Philosophy, Chemistry, Geology, &c., and the Moral Sciences. If we include under the last head, history and geography, here are three, out of the five courses, to which the mercantile student might give two years' study with the utmost advantage. He would then enter the counting-house with enlarged views of the duties and the influence of his profession, and have higher and better qualifications for that rank of Merchant Prince, which (rather in violation of republican consistency) our newspaper rhetoricians are fond of bestowing on the merely wealthy trader.

## "THE GROWTH OF TOWNS IN THE UNITED STATES."

Since the pages embracing the article with the above caption, in a former part of the present number of the *Merchants' Magazine*, were struck off, we have received a letter from the author, explanatory of a passsage in that paper, as follows:—

ADRIAN, OHIO, *October* 20, 1851.

FREEMAN HUNT, ESQ., *Editor of the Merchants' Magazine, etc.*

DEAR SIR:—It has occurred to me that my meaning, in the closing paragraph of the communication lately sent you, is not fully expressed. In saying that Cincinnati, St. Louis, Chicago, and Toledo will, in the time mentioned, become the largest cities of our Union, I meant to express the opinion, that the largest of the four will be more populous than New York; the next largest, exceed Philadelphia; the third in size, be larger than Baltimore or Boston; and the fourth be greater than New Orleans.

Respectfully yours, &c., J. W. SCOTT.

## HOW TO MAKE MONEY IN BUSINESS.

What perturbation of mind? What struggling, and scratching, and shifting, and lying, and cheating, is practiced every day by mammon-worshippers to make money? What a comparison between the successful and unsuccessful? Of the millions who embark in business to make money, how few succeed? And why? Because but few know the secret of success. Most think it chance, or good fortune, but they are sadly mistaken; and if such as are now pining to get rich would only strictly mind the following advice and be guided by it, there would be no doubt of their realizing their golden dreams:—

Let the business of everybody else alone, and attend to your own; don't buy what you don't want; use every hour to advangtage, and study to make even leizure hours useful; think twice before you throw away a shilling, remember you will have another to make for it; find recreation in looking after your business; buy low, sell fair, and take care of the profits; look over your books regularly, and if you find an error, trace it out; should a stroke of misfortune come upon you in trade, retrench, work harder, but never fly the track; confront difficulties with unflinching perseverance, and they will disappear at last; though you should fail in the struggle, you will be honored—but shrink from the task and you will be despised.

## THE PRESENCE OF ARSENIC IN BREAD.

In a recent lecture on muriatic acid at the Glasgow Mechanics' Institution, Dr. Penny stated that nearly all the muriatic acid sold in Glasgow is contaminated with arsenic. The doctor said he had examined very carefully numerous samples obtained from different makers and retail shops, in all of which, with one exception, he had discovered, by Reinsche's test, the presence of an appreciable proportion of this poisonous substance. Now, it is well known that muriatic acid, with other chemical articles, is used very frequently as a substitute for yeast in the making of bread. It therefore really becomes a very serious question whether the employment of an impure acid like that mentioned for making such an essential article of food as bread may not be attended with highly injurious consequences.

# THE BOOK TRADE.

1.—*The Female Prose Writers of America. With Portraits, Biographical Notices and specimens of their Writings.* By JOHN S. HART, LL. D. Embellished with elegant illustrations. Imperial 8vo., pp. 432. Philadelphia: E. H. Butler & Co.

The Female Authors, whose writings and portraits embellish these pages, are among the most charming of whom we ever boast, S. J. Hale, McIntosh, Kirkland, Sigourney, Fanny Forrester, and almost all of note are here included. The extracts are generally the best pieces of the writers, and such as have become long ago favorites with the public. The aim of the editor, however, seems to have been to select such passages as were characteristic of the different styles of the writers. The biographical sketches are prepared with considerable fullness and with a due appreciation of the peculiar traits of each person. The portraits, of which there are several, have been executed with uncommon excellence. They are very finely engraved, and care has evidently been taken to make them correct as likenesses. The mechanical execution of the volume is superb. As a whole, it forms one of the most desirable works in the entire series of gift books.

2.—*The Poetical Works of Samuel Rogers.* Illuustrated with Engravings by the first artists, from designs by Lawrence, Stothard, Turner, and Vasan. 8vo. pp. 451. Philadelphia: E. H. Butler & Co.

No one can be uninformed of the merits of Rogers' Poetry, or of the work to which that fine scholar and charming poet is entitled. Customary as it has of late become to issue his poems in an elegant and illustrated form, it is seldom that a more beautiful edition of them than the present has appeared. The illustrations are executed with great skill from natural scenes, which are highly expressive of character, and the extreme beauty and tastefulness of the typography, of the paper and the binding, are such as to gratify the most fastidious and refined taste.

3.—*Leaflet's of Memory; an Illuminated Annual for* 1852. Edited by REYNELL COATES, M. D. Imperial 8vo., pp. 312. Philadelphia: E. H. Butler & Co.

The general impression of this volume is very fine. Its contents comprise a large variety of pieces, both in prose and verse. These are in various humors, all of which must please the reader. Among the contributors we notice the familiar names of Alice B. Neal, Camilla Toulmin, author of Cont. Fleming, Charles White, and the editor. There are, in addition, many articles from anonymous writers. The embellishments are in various styles, such as mezzotint, line engraving, &c. Some of the designs are admirable, such as the "Morning," "Choose between us," the latter of which will please the fancy and test the taste of all. The external appearance of the volume is very chaste and rich, seldom surpassed in the style of its execution by a better taste or design in the binder. The illuminated title-pages display more than ordinary skill in this novel art.

4.—*Episodes of Insect Life.* By ACHETA DOMESTICA. Third Series. 8vo., pp. 431. New York: J. S. Redfield.

The insects of autumn form the contents of this volume, and complete this charming series of episodes. To those who are unacquainted with the wonders of Entomology, we commend these volumes, which combine a sprinkling of science, imagination, and art, interwoven with a rich fancy and exquisite taste. The work is issued in an admirable style, on fine paper, with clear and open print, and numerous well-executed illustrations. Several of the insects of autumn, as the beetle, the glow-worm, the scavalocus, &c., are taken as examples of the large class of living things to which they belong, and entertaining accounts of their habits are given during their different stages of existence.

5.—*Select Original Dialogues, or Spanish and English Conversations; followed by a Collection of Pieces in Prose and Verse, adapted to the Use of Spanish Classes in Schools and Academies.* By JOSE ANTONIA PIZZARRO. Third Edition. 12mo., pp. 284. Baltimore: John Murphy.

This is an excellent work to aid in the acquisition of the Spanish language. It is prepared by one to whom the language is the mother tongue, and all its obscurities are explained with much clearness.

6.—*The Nile Boat: or Glimpses of the Land of Egypt.* By W. H. Bartlett, author of "Forty days in the Desert." Imperial octavo, pp. 218. New York: Harper & Brothers.

An illustrated work on Egypt, such as this volume, is a novelty. The number of illustrations which it contains is forty six, in addition to numerous cuts, which were drawn upon the spot, and many of them with the learned lucida. They represent as great a variety of Egyptian scenery and monuments as it was possible to include within the same compass—and they bear the appearance of truthfulness to a surprising degree. These plates are executed with skill and taste. The accompanying text will be found to contain a very agreeable narrative of a tour in Egypt, interspersed with many anecdotes, illustrative of the manners and habits of its present population. It is printed on fine paper, and both within and without makes a rich appearance; on the whole, we regard it as a suberb volume, upon this most wonderful country.

7.—*The Elements of Algebra, designed for Beginners.* By Elias Loomis, M. A. 12mo., pp. 260. New York: Harper & Brothers.

A treatise like this is entitled to be received with more than ordinary favor. It is the work of a scholar, and bears upon its face the marks of his attainments; it is, likewise, an admirable introduction to the science of Algebra. Too many works on this subject are prepared under a total forgetfulness of the powers and capacities of the youth who are to use them; they are excellent for mature minds, but totally inappropriate to youth. This work of Mr. Loomis is quite free from this unpardonable blunder. With singular simplicity, he has adapted his explanations of the abstruse points in the elements of algebra, to the weak and half unfolded powers of youth, and thus leads them on, by easy steps, as they become familiar with the study. The work is worthy of the attention of all those teachers who are delighted at witnessing a happy and agreeable progress in those of their pupils who take up this subject.

8.—*The History of the Restoration of Monarchy in France.* By Alphonso De Lamartine. Vol. 1. 12mo., pp. 530. New York: Harper & Brothers.

In this work, of which the first volume is already issued, Lamartine has drawn, in his graphic style, a full sketch, or rather history, of the restorations of 1814 and 1815. He writes as a republican, and with the entire conviction that a Republic is the wisest and the only course for France. As a work, it partakes of all that eloquent picture-drawing which characterizes the "Girondists," with its power of awakening deep interest in the reader. It lacks that detail, and reference to authority, and critical nicety, which we are wont to look for in a history, but giving credence to its statements it will not soon be surpassed in its merits.

9.—*Rule and Misrule of the English in America.* By the Author of "Sam Slick," &c. 12mo., pp. 379. New York: Harper & Brothers.

This work, by an author who has attained considerable notoriety for his humorous productions, is of an entirely different stamp from the previous ones. Its aim is to show that the success of republicanism in America is an exception, a result which has proved favorable in spite of its own nature. Of course this is a somewhat novel view to take of our institutions, and every one of intelligence must have some curiosity to learn what an able and talented writer would advance in its support, as well as to look at ourselves from this point of view. The work is a creditable and meritorious one in all respects, with the exception of its opinions.

10.—*The Rose of Sharon; a Religious Souvenir for* 1852. Edited by Mrs. C. M. Sawyer. Boston: A Tompkins & B. B. Mussey & Co.

This beautiful but unpretending Annual comes to us this year equal to the last, and in some respects superior to any of its predecessors. Twelve years has this literary Rose opened "its annual blossoms to the day, each year shedding a richer fragrance, and beaming with more refined and graceful beauty." In its pages we recognize many of its early contributors, and also the growth and development of their intellectual powers. The engravings are all in good taste, and in keeping with the progress the art has made since the publication of the first volume. The tone of this annual is religious, without cant, sectarianism, or illiberality. The pure and practical teachings of Christianity are blended, and harmonize in every tale, essay or poem; and we only regret that our alloted space will not permit us to copy the sound and sensable essay, "Limitations of Business," from the pen of the Rev. E. H. Chapin. We hope to find room for it hereafter.

11.—*Sketches of Boston, Past and Present, and of some Few Places in its Vicinity. With one hundred and twenty Engravings and Maps.* 8vo., pp. 370. Boston: Phillips, Sampson & Co.

The object of Mr. Homans, the compiler, has been to furnish in a small compass, for the use of citizens and strangers, a concise history, with a copious account of the Charitable institutions and public buildings of Boston, together with noted places in the vicinity. Among the latter, Cambridge comes in for a full share. The University is elaborately and thoroughly described, showing the organization of the various departments, viz., Classical, Law, Theological, Medical, Astronomical, Scientific, &c. The engravings of the Scientific School, Public Observatory, &c., are from drawings made expressly for the work. Among the contributors to this beautiful volume, we notice the names of Hon. Josiah Quincy, Professors Bond, Horsford and Francis, of Harvard College; Dr. Howe (Superintendent of the Blind Asylum); the late General Dearborn; Rev. T. B. Felt, of the Massachusetts Historical Society. The volume contains 65 engravings of churches, 24 of public schools, 19 of other public buildings in the city; and 18 of Cambridge, Lynn, Waltham and Roxbury, the Cemeteries, &c.

12.—*Our Campaign; or Thoughts on the Career of Life.* By E. Winchester Reynolds. 12mo., pp. 336. Boston: Philips, Sampson & Co.

The author of this volume possesses one of those independent minds which refuses to conform to customs whether of thought or action, but is animated with a degree of that inherent liberty which is natural to all men, although enjoyed by very few. In these pages will be found many speculations which extend beyond the views of the mass of men and beyond the comprehension of those who are educated to forms and systems of opinion as the only abiding places of truth. They are written in a genial spirit, and will impress with a conviction of their truthfulness the ignorant, both those who are learnedly so, and those who are unlearnedly so.

13.—*Glances at Europe: in a series of letters from Great Britain, France, Italy, and Switzerland, &c., during the summer of* 1851. *Including notices of the great Exhibition, or World's Fair.* By Horace Greeley. 12mo., pp. 350. New York: Dewitt & Davenport.

The letters of Mr. Greeley have been very widely read by the public and received with extensive favor. The views presented by the author are of that class which is generally overlooked by the mass of travelers. For this reason they are novel and their interest is heightened by their practical character and their immediate relation to the mass of society. In this view they are exceedingly welcome. Beyond this point also the author disclaims all pretensions. He evidently labored under many disadvantages on the continent from a lack of familiarity with the languages. This has deprived us of much that would have been of great interest.

14.—*Moral Reflections, Sentences and Maxims of Francis Duc De La Rochefoucaut—newly translated from the French. With an introduction and notes. To which are added, Moral Sentences and Maxims of Stanislaus, King of Poland.* 12mo., pp. 189. New York: Wm. Gowans.

These admirable maxims have long been before the public. The present edition is a very neat and tasteful one, and presents them not only in a new dress, but in the language of a new translation. Their style is excellent and their general aim appears to be not so much to point out a successful system of conduct as to detect and expose those actions which proceed from false and impure motives. Viewed in the light of practical morals, they are as elevated and pure as if they had fallen from the pen of many eminent moral writers. The terseness and vigor of the expression and the clearness of the thought, are seldom surpassed.

15.—*The Art-Journal.* London and New York: George Virtue.

The present (October) number contains the sixth part of the Illustrated Catalogue of the Great Exhibition, which completes the work, and embraces a preface with a table of contents of works illustrated; a comprehensive history of the exhibition, with a number of admirable exterior and interior views; the concluding part of Robert Hunts' essay on the Science of the exhibion; and a continuation of the Historical Catalogue. On the whole, we regard this account of the exhibition as the most perfect and beautiful that has been attempted. The illustrations of the present number of the *Art-Journal* are equal to the best that have appeared in the work, since its commencement, and it is quite unnecessary to bestow higher praise. Indeed, as a whole, this *Journal* has never been surpassed or equaled (in all its parts) by any former effort of combined taste and skill.

16.—*The Iris: An Illustrated Souvenir for* 1852. Edited by JOHN S. HART, LL. D. Imperial 8vo., pp. 298. Philadelphia: Lippincott, Grambo & Co.

One of the most interesting features of this splendid volume is, that it contains a series of colored drawings of striking and remarkable objects connected with the traditions of Indians on the North-Western frontier. The original drawings were made by Captain Eastman, of the Topographical Corps, who was stationed for nine years in that part of the country. His accomplished lady, during a portion of that time, collected the traditions themselves and wove them into tales and poems that let us perceive the very heart of Indian life. These delightful tales form a portion of the contents of this volume. The other articles are by some of our most popular writers. It is the embellishments which are a novelty in this class of books. They are executed with much skill, and colored with excellent taste. As a whole the Iris is one of the most brilliant of the works of the season.

17.—*The Life of John Calvin, the Great Reformer.* Translated from the German of PAUL HENRY, D. D., by HENRY STEBBING. 2 vol. 8vo., pp, 454. New York: Robert Carter & Brothers.

The last twenty years of the life of Calvin are comprised in the second volume. This was, perhaps the most important period of the Reformer's life. His views were, at this time, most severely handled, and the religious controversies in which he engaged were more momentous, and involved more serious results. During this period, also, the memorable trial and martyrdom of Servetus took place. We say martyrdom, because every man is a martyr who is put to death for his religious belief. The author handles this subject with a degree of timidity and tenderness. His statements contain all the leading facts of the case, presented in their most favorable light. This life of Calvin should be received as the ablest and the most complete that exists. It is probably the fullest and most explicit that will ever be written.

18.—*A Class Book of Chemistry, in which the principles of the science are familiarly explained and applied to the Arts, Agriculture, Physiology, Dietetics, Ventillation, and the most important Phenomena of nature. Designed for the use of Academies and Schools, and for popular reading.* By EDWARD L. YUMANS 12mo., pp. 356. New York: D. Appleton & Co.

This is an admirable popular treatise on the subject of Chemistry; it is so clear, so simple, yet so practical and so eloquent that it must rapidly supercede all other works of the kind in the favor of the public. The author has suffered under many disadvantages during its preparation from physical injuries, and as is often the case those who struggle under difficulties produce the best results in their several departments of labor.

19.—*Malmitztic the Taltec; and the Cavaliers of the Cross.* By W. W. FOSDICK. 12mo., pp. 356. Cincinnati: Moore & Anderson. New York: Mark H. Newman.

The scenes of this tale are designed to portray social habits and customs among the ancient Mexicans at the time of the invasion of Cortez. In many particulars of this kind, it will impart an interest to the reader; in its style, however, it is often high wrought and strained even to the utmost limit of composition.

20.—*A Book of Romances, Lyrics and Songs.* By BAYARD TAYLOR. 12mo., pp. 153. Boston: Ticknor, Reed & Fields.

These poems are marked with many excellences, the healthful tone of the thought—the chasteness of the language, and the natural and easy flow of the verse, with occasional passages of striking power and beauty, are sufficient to secure for them high esteem.

21.—*Boydell's Illustrations of Shakspeare.* American Edition. Part 35. New York: S. Spooner.

The illustrations of this number consist of "The Last Scene" of the Seven Ages of Man, and a passage in the first scene of the first act of "King Lear," at the moment when the enraged king spurns Cordelia from him. The engravings are both very expressive, and appear to be worthy to be regarded as among the best of the collection.

22.—*The Mind and the Heart.* By FRANKLIN W. FISH. 12mo., pp. 72. New York: Adriance, Sherman & Co.

These brief poems possess a clearness and simplicity of style, and a sympathy with many of the feelings of the heart, which will attract to them many readers. As poetry, they have no superior merits.

23.—*Fall of Poland; containing an Analytical and a Philosophical Account of the Causes which Conspired in the Ruin of that Nation, together with a History of the Country from its Origin.* By L. C. SAXTON. 2 vols., 12mo., pp. 563 and 621. New York: Charles Scribner.

It is full time that the history of Poland was written. After a few years under the iron sceptres of Austria and Russia, scarce anything will remain of her former state and glory, unless it be some sparks of that invincible spirit of freedom, which, it is said, can never be entirely extinguished in the human bosom. The author of these volumes has undertaken his task as if it was to be the last, the final effort to draw the features of that glorious nation, whose light has disappeared, perhaps forever, from the European constellation. He has entered upon his labor with full purpose to make his work conform to the standard of the best pieces of historical composition. The view which he has taken of his subject may, therefore, be regarded as complete, as presenting it in every light, and weighing and testing the importance of principles, as discussing the influence of measures, and showing the causes of misfortune to Poland. Accordingly, the titles of the chapters embrace departments of historical knowledge, and the whole, grouped together, comprise all that is of general interest in a historical or philosophical view of this nation. We regret that the author has not taken more pains in regard to his style—it certainly lacks a clearness and precision which would have added greatly to its force and beauty.

24.—*Memoirs of the Queens of France. Including a Memoir of Her Majesty, the late Queen of the French, (Marie Amelie.)* By Mrs. FORBES BUSH. From the Second London Edition. 2 vols., pp. 360 and 351. Philadelphia: A. Hart.

Scarcely any modern nation can boast of having had more queens than France. The details of many of them are, however, quite scanty—of others, they are abundant. The author has, nevertheless, used discretion in the length of the memoirs generally. Those whose merits are worthy of it, and whose fame demanded, are treated at considerable length, while of others, we have little more than the place of birth, &c. The style of these volumes is easy and natural, and the numerous anecdotes which they contain, and the various characters which are delineated, are sufficient to attach to them a more than transitory interest.

25.—*Memoirs of a London Doll, written by Herself.* Edited by Mrs. FAIRSTAR. With Engravings by Baker, from Designs by Billings. 24mo., pp. 152.

26.—*Tales from Catland, for Little Kittens.* By an OLD TABBY. With Engravings from Designs by Billings. 24mo., pp. 114. Boston: Ticknor, Reed & Fields.

As juvenile works, these little volumes are quite attractive. Youthful readers will find much to enlist their attention, and instruct their minds, while the beauty of their embellishments and appearance must readily excite an interest in such readers.

27.—*My First Visit to Europe, or Sketches of Society, Scenery, and Antiquities, in England, Wales, Ireland, Scotland, and France.* By ANDREW DICKINSON. Second edition. 12mo., pp. 214. New York: G. P. Putnam.

A volume like this will be read with pleasure for the notices which it contains of places once the abode of eminent literary men, and circumstances of a kindred character. It is devoted almost entirely to the author's observations. It displays considerable taste for literature, and a high appreciation of English writers.

28.—*Manuel of the Corporation of the City of New York for the year* 1851. By D. T. VALENTINE. 12mo., pp. 480. Printed for the Common Council.

This annual volume was prepared by the author, in pursuance of a resolution of the Common Council. Although designed more particularly for the use of that body, it is so complete in all that relates to municipal affairs, and embellished by such a variety of old maps and historical documents, that citizens, generally, will find it both useful and instructive.

29.—*Gramatica Inglesa Keducirdu a viente y dos Lecciones.* Por D. JOSE DE URCULLA. From the seventh Paris edition, amended and revised by FAYETTE ROBINSON. 12mo., pp. 262. Philadelphia: Thomas Cowperthwaite.

For a grammar of the English language in Spanish, this work is very full and complete. The difficult idioms and expressions are explained with much simplicity. The native of Spain, or South America, will find this among the most valuable books for the acquisition of English which we have.

## "THE MANUFACTURE OF IRON IN PENNSYLVANIA."

The subjoined explanations of the tables commencing on the opposite page, are connected with the article on the "Manufacture of Iron in Pennsylvania," in a former part of the present number, and should have been appended to that article, but were inadvertently omitted by the printer.

### EXPLANATIONS REFERRING TO THE TABLES APPENDED TO THE PRESENT NUMBER OF THIS MAGAZINE.

The *ton of iron* is always the gross ton of 2,240 lbs.; except *Blooms and Puddled Bar*, which are bought and sold by the Ankoney or double gross ton of 2,464 lbs.; and nails, which are sold by the net ton of 2,000 lbs.; *Anthracite Coal* is sold by the gross ton of 2,240 lbs.; *Bituminous Coal* by the bushel of 80 lbs.

In the statement of the Blast Furnaces in the column headed "kind of ore used," H signifies Brown Hematite ore. M signifies Magnetic ore. F signifies Fossiliferous Red Oxyd or Fossil ore. C signifies Argillaceous Carbonate. B signifies Bog ore.

In the column headed "Blast—Tuyeres—Diam.," the figures represent the diameter of the blowing nozzles.

In the column headed "Pressure," the figures represent the pressure to the square inch in pounds avoirdupoise.

In the column headed "Market"—"E" means Philadelphia. "W" means Pittsburg. "H" means home—or the vicinity of the works.

In the column headed "kind of metal made"—1 signifies coarse grey or best foundry iron. 2 signifies close grey iron. 3 signifies mottled and white iron or hard iron.

In some instances there are figures in the column headed "situation, Post-office," where such occur they signify the distance of the works from the Post-office.

The Hot Blast Furnaces which have dates assigned them prior to 1830, were built for Cold Blast Furnaces, and have been since changed to Hot Blast. The dates given are those when the works were completed and put into operation.

The tables succeed in the following order.

### EASTERN PENNSYLVANIA.

I. Statement showing *the number and condition of each sort of Iron Works and the capital invested in land and buildings* in each county in *Eastern Pennsylvania*, in the year 1850.

II. A detailed statement of all the *Anthracite Blast Furnaces in the State* of Pennsylvania, in the year 1850,

III. A detailed statement of all the *Hot Blast Charcoal Furnaces* in *Eastern* Pennsylvania, in the year 1850.

IV. A detailed statement of all the *Cold Blast Charcoal Furnaces* in *Eastern* Pennsylvania, in the year 1850.

V. A detailed statement of all the *Bloomery Forges* in *Eastern* Penn., in the year 1850.

VI. A detailed statement of the *Forges* in *Eastern* Pennsylvania in the year 1850, not properly belonging to either of the other classes.

VII. A detailed statement of the *Charcoal Forges* in *Eastern* Penn., in the year 1850.

VIII. A detailed statement of all the *Rolling Mills in Eastern* Penn., in the year 1850.

### WESTERN PENNSYLVANIA.

IX. Statement showing *the number and condition of each sort of Iron Works, and the capital invested in land and buildings* in each county in *Western Pennsylvania*, in the year 1850.

X. A detailed statement of all the *Charcoal Hot Blast Furnaces* in *Western* Pennsylvania, in the year 1850.

XI. A detailed statement of all the *Raw Bituminous Coal* Hot Blast Furnaces *in Pennsylvania*, in the year 1850.

XII. A detailed statement of all the *Coke Hot Blast Furnaces in the State* of Pennsylvania, in the year 1850.

XIII. A detailed statement of all the *Charcoal Cold Blast Furnaces* in *Western* Pennsylvania, in the year 1850.

XIV. A detailed statement of all the *Charcoal Forges in Western* Pennsylvania, in the year 1850.

XV. A detailed statement of all the *Rolling Mills in Western* Pennsylvania, in the year 1850.

NOTE.—Owing to oversight of the printer, the tables are not numbered; the reader is requested to number them as above, for facility of reference.

**STATEMENT**, showing the number and condition of each sort of **IRON WORKS**, and the
**PENNSYLVANIA**, in the y

| COUNTY. | ANTHRACITE BLAST FURNACES. | | | | | | CHARCOAL BLAST FURNACES. HOT BLAST. | | | | | COLD BLAST. | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | S.* F. | †Un-fin'sd. | In. | Out. | Total. | Investment. | S.* F. | In. | Out. | Total No. | Investment. | S.* F. | In. | Out. | Total No. | Inves |
| 1. Adams, | | | | | 0 | | | | | 0 | | | | 1 | 1 | |
| 2. Blair, | | | | | 0 | | 4 | 4 | 4 | 8 | 283,000 | | 4 | | 4 | 27 |
| 3. Bedford, | | | | | 0 | | 1 | | 2 | 2 | 25,000 | 1 | | 1 | 1 | |
| 4. Berks, | | | 1 | | 1 | 65,000 | 2 | 4 | | 4 | 201,000 | 1 | 6 | 2 | 8 | 33 |
| 5. Bucks, | | 1 | 1 | | 2 | 120,000 | | | | 0 | | | | | *0* | |
| 6. *Bradford*, | | | | | 0 | | | | | 0 | | | | | *0* | |
| 7. Carbon, | 1 | | 1 | 1 | 2 | 15,000 | | 1 | 1 | 2 | 80,000 | | | | 0 | |
| 8. Cumberland, | | | | | *0* | | 2 | *1* | *1* | 2 | 215,000 | 5 | | 5 | 5 | 15 |
| 9. Columbia, | 5 | | 5 | 6 | 11 | 745,000 | 2 | 2 | 2 | 4 | 51,000 | 1 | 1 | | 1 | |
| 10. Chester, | | | 1 | 2 | 3 | 300,000 | | | | 0 | | | 2 | | 2 | 20 |
| 11. Centre, | | | | | 0 | | 1 | 1 | 1 | 2 | 180,000 | 5 | 4 | 4 | 8 | 30 |
| 12. Clearfield, | | | | | 0 | | | | 1 | 1 | 84,000 | | | | 0 | |
| 13. Clinton, | | | | | 0 | | 1 | 1 | 2 | 3 | 195,000 | 2 | | 2 | 2 | |
| 14. Dauphin, | 1 | | | 2 | 2 | 103,000 | 1 | 1 | 1 | 2 | 100,000 | 2 | 2 | | 2 | |
| 15. Delaware, | | | | | 0 | | | | | 0 | | | | | | |
| 16. Franklin, | | | | | 0 | | 1 | 2 | | 2 | 101,000 | 3 | 1 | 5 | 6 | 11 |
| 17. Huntingdon, | | | | | 0 | | 6 | 6 | 3 | 9 | 345,000 | 4 | 3 | 3 | 6 | 23 |
| 18. Juniata, | | | | | 0 | | | | | 0 | | | | | 0 | |
| 19. Lehigh, | | | 6 | 1 | 7 | 410,000 | | | 1 | 1 | 60,000 | 1 | | 1 | 1 | |
| 20. Lycoming, | | | | | 0 | | 1 | | 1 | 1 | 25,000 | | 1 | 1 | 2 | |
| 21. Luzerne, | | | 2 | 2 | 4 | 270,000 | | 1 | | 1 | 20,000 | | | | 0 | |
| 22. Lebanon, | | 1 | 1 | 1 | 3 | 195,000 | | | | 0 | | | 2 | 1 | 3 | 42 |
| 23. Lancaster, | 3 | 1 | 5 | 3 | 9 | 305,000 | | 3 | 2 | 5 | 335,000 | | 1 | 1 | 2 | |
| 24. Mifflin, | | | | | 0 | | 3 | | 4 | 4 | 95,000 | | | 1 | 1 | |
| 25. Monroe, | | | | | 0 | | | | | 0 | | | | | 0 | |
| 26. Montgomery, | 1 | | 2 | 3 | 5 | 273,000 | | | | 0 | | | | 1 | 1 | |
| 27. Northumberland, | 1 | | 1 | 1 | 2 | 120,000 | | | | 0 | | 1 | | 1 | 1 | |
| 28. Northampton, | 1 | 1 | 2 | 1 | 4 | 260,000 | | | | 0 | | | | | 0 | |
| 29. Potter, | | | | | 0 | | | | | 0 | | | | | 0 | |
| 30. Perry, | | | | | 0 | | 2 | | 3 | 3 | 90,000 | 1 | | 2 | 2 | 3 |
| 31. Pike, | | | | | 0 | | | | | 0 | | | | | 0 | |
| 32. Philadelphia, | | | | | 0 | | | | | 0 | | | | | 0 | |
| 33. Susquehanna, | | | | | 0 | | | | | 0 | | | | | 0 | |
| 34. Sullivan, | | | | | 0 | | | | | 0 | | | | | 0 | |
| 35. Schuylkill, | 1 | 1 | 1 | | 2 | 40,000 | | 2 | | 2 | 53,500 | | | 1 | 1 | 1 |
| 36. Tioga, | | | | | 0 | | 1 | 1 | | 1 | 20,000 | | | | 0 | |
| 37. Union, | | | | | 0 | | 2 | 1 | 2 | 3 | 31,000 | | | | 0 | |
| 38. Wayne, | | | | | 0 | | | | | 0 | | | | | 0 | |
| 39. Wyoming, | | | | | 0 | | | | | 0 | | | | | 0 | |
| 40. York, | | | | | 0 | | 2 | | 5 | 5 | 278,000 | | | | 0 | |
| | 14 | 5 | 29 | 23 | 57 | 3,221,000 | 32 | 31 | 36 | 67 | 2,867,500 | 27 | 27 | 33 | 60 | 2,35 |

* Sold by the Sheriff, or failed, since 1840.

† On 2 of these furnaces the work has been suspended over a year. On 2 others the work will be completed, but th
take the place of another one worn out.

, and the capital invested in the Land and Buildings in each County in EASTERN
, in the year 1850.

| ACES. D BLAST. | | | BLOOMERIES. | | | FORGES. | | | ROLLING MILLS. | | | TOTAL. | | | Counties. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| ut. | Total No. | Investment. | S.* F. | No. | Investment. | S.* F. | No. | Investment. | S.* F. | No. | Investment | S.* F. | No. | Investment. | |
| 1 | 1 | 4,000 | | 0 | | | 0 | | | 0 | | | 1 | 4,000 | 1. |
| | 4 | 275,000 | | 0 | | 2 | 14 | 314,000 | | 1 | 50,000 | 6 | 27 | 922,000 | 2. |
| 1 | 1 | 10,000 | | 0 | | 2 | 3 | 18,000 | | 0 | | 4 | 6 | 53,000 | 3. |
| 2 | 8 | 335,000 | | 0 | | 5 | 23 | 320,000 | | 5 | 310,000 | 8 | 41 | 1,231,000 | 4. |
| | 0 | | | 0 | | | 0 | | | 0 | | | 2 | 120,000 | 5. |
| | 0 | | | 0 | | | 0 | | | 0 | | | 0 | | 6. |
| | 0 | | | 4 | 11,700 | | 2 | 12,800 | | 0 | | 1 | 10 | 119,500 | 7. |
| 5 | 5 | 159,000 | | 0 | | 3 | 4 | 75,000 | | 1 | 75,000 | 10 | 12 | 524,000 | 8. |
| | 1 | 3,500 | | 0 | | 1 | 1 | 5,000 | 1 | 3 | 303,000 | 10 | 20 | 1,107,500 | 9. |
| | 2 | 200,000 | | 0 | | 1 | 6 | 106,000 | 2 | 14 | 642,200 | 3 | 25 | 1,248,200 | 10. |
| 4 | 8 | 308,000 | | 0 | | 2 | 5 | 63,000 | 2 | 5 | 114,000 | 10 | 20 | 665,000 | 11. |
| | 0 | | | 0 | | | | | | 0 | | | 1 | 84,000 | 12. |
| 2 | 2 | 10,000 | | 0 | | | 1 | 15,000 | | 0 | | 1 | 6 | 220,000 | 13. |
| | 2 | 40,000 | | 0 | | | 2 | 19,000 | 1 | 1 | 20,000 | 5 | 9 | 282,000 | 14. |
| | | | | 0 | | | 0 | | | 1 | 16,000 | | 1 | 16,000 | 15. |
| 5 | 6 | 112,000 | | 0 | | 3 | 8 | 61,500 | 1 | 1 | 32,000 | 8 | 17 | 306,500 | 16. |
| 3 | 6 | 230,000 | | 0 | | 5 | 11 | 256,000 | 1 | 2 | 65,000 | 16 | 28 | 896,000 | 17. |
| | 0 | | | 0 | | | 0 | | | 0 | | | 0 | | 18. |
| 1 | 1 | 8,000 | | 0 | | | 0 | | | 0 | | 1 | 9 | 478,000 | 19. |
| 1 | 2 | 50,000 | | 0 | | | 3 | 28,000 | | 2 | 47,500 | 1 | 8 | 150,500 | 20. |
| | 0 | | | 0 | | | 1 | 12,000 | 1 | 2 | 400,000 | 1 | 8 | 702,000 | 21. |
| 1 | 3 | 420,000 | | 0 | | | 3 | 70,000 | | 0 | | | 9 | 685,000 | 22. |
| 1 | 2 | 95,000 | | 0 | | 2 | 12 | 223,000 | | 2 | 315,000 | 5 | 30 | 1,273,000 | 23. |
| 1 | 1 | 10,000 | | 0 | | 2 | 2 | 60,000 | | 0 | | 5 | 7 | 165,000 | 24. |
| | 0 | | | 1 | 15,000 | | 0 | | | 0 | | | 1 | 15,000 | 25. |
| 1 | 1 | 23,000 | | 0 | | 1 | 2 | 20,000 | | 4 | 187,000 | 2 | 12 | 503,000 | 26. |
| 1 | 1 | 20,000 | | 0 | | | 1 | 6,000 | | 0 | | 2 | 4 | 146,000 | 27. |
| | 0 | | 1 | 1 | 2,000 | | 0 | | | 1 | 35,000 | 2 | 6 | 297,000 | 28. |
| | 0 | | | 0 | | | 0 | | | 0 | | | 0 | | 29. |
| 2 | 2 | 30,000 | | 0 | | 1 | 1 | 60,000 | | 1 | 185,000 | 4 | 7 | 365,000 | 30. |
| | 0 | | | 0 | | | 0 | | | 0 | | | 0 | | 31. |
| | 0 | | | 0 | | | 3 | 45,000 | 2 | 8 | 307,000 | 2 | 11 | 352,000 | 32. |
| | 0 | | | 0 | | | 0 | | | 0 | | | 0 | | 33. |
| | 0 | | | 0 | | | 0 | | | 0 | | | 0 | | 34. |
| | 1 | 14,000 | | 0 | | 4 | 6 | 127,000 | 1 | 1 | 20,000 | 6 | 12 | 254,500 | 35. |
| | 0 | | | 0 | | | 0 | | | 1 | 5,000 | 1 | 2 | 25,000 | 36. |
| | 0 | | | 0 | | 1 | 1 | 6,000 | | 0 | | 3 | 4 | 37,000 | 37. |
| | 0 | | | 0 | | | 0 | | | 0 | | | 0 | | 38. |
| | 0 | | | 0 | | | 0 | | | 0 | | | 0 | | 39. |
| | 0 | | | 0 | | 1 | 3 | 90,000 | | 0 | | 3 | 8 | 368,000 | 40. |
| | 60 | 2,356,500 | 1 | 6 | 28,700 | 36 | 118 | 2,012,300 | 12 | 56 | 3,128,700 | 120 | 364 | 13,614,700 | |

eted, but they will not be blown in. The remaining furnace will be completed and blown in, as it is to

# A Detailed Statement of all the ANTHRACITE BLAST F

| COUNTY. | Sold by Sheriff, or failed, and date. | No. FURNACES. Unfin'sd. | In Blast. | Out of Blast. | Date of construction. | NAME OF WORKS. | | SITUATION. P. O. | OWNERS. | |
|---|---|---|---|---|---|---|---|---|---|---|
| Berks, | | | 1 | | 1846 | Henry Clay, | | Reading, | Eckert & Bro., | N |
| Bucks, | | 1 | 1 | | 1848 | Durham, | | Durham, | Jos. Whitaker & Co. | |
| Columbia, | 1843 S | | | 1 | 1838† | Montour, | 1 | Danville, | Montour I. Co. | |
| do. | 1844 S | | | 1 | 1839 | " | 2 | " | " | |
| do. | 1844 S | | 1 | | 1839 | " | 3 | " | " | |
| do. | | | 1 | | 1846 | " | 4 | " | " | |
| do. | 1842 S | | | 1 | 1846 | Franklin, | | " | Jacob B. Maus & Co. | |
| do. | 1848 F | | | 1 | 1840 | Roaring Creek, | | " | Trustees U. S. Bank, | |
| do. | | | 1 | | 1840 | Columbia, | | " | Geo. Patterson, | J. P. |
| do. | | | 2 | | 1845 | Iron Dale, | | Bloomsburg, | Bloomsburg I. Co. | N |
| do. | | | | 1 | 1845 | Williamsburg, | | Light Street, | M. McDowell, | |
| do. | | | | 1 | 1847 | Light Street, | | " | Light Street I. Co. | |
| Carbon, | 1848 F | | 1 | | 1838 | Carbon, | | Mauch Chunk, | J. Richards & Sons, | |
| do. | | | | 1 | 1826 | Mauch Chunk, | | " | Lehigh C. & N. Co. | |
| Chester, | | | | 1 | 1845 | Phœnix, | 1 | Phœnixville, | Reeves, Buck & Co. | |
| do. | | | 1 | | 1845 | " | 2 | " | " | |
| do. | | | | 1 | 1847 | " | 3 | " | " | |
| Dauphin, | | | | 1 | 1845 | Harrisburg, | | Harrisburg, | D. R. Porter, | |
| do. | 1847 S | | | 1 | 1834‡ | Emeline, | | Dauphin, | A. C. Bayard, | |
| Lehigh, | | | | 1 | 1840 | Crane, | 1 | Catasauqua, | Lehigh Crane I. Co. | |
| do. | | | 1 | | 1842 | " | 2 | " | " | |
| do. | | | 1 | | 1846 | " | 3 | " | " | |
| do. | | | 1 | | 1850 | " | 4 | " | " | |
| do. | | | 1 | | 1850 | " | 5 | " | " | |
| do. | | | 1 | | 1846 | Allentown, | 1 | Allentown, | D. E. Wilson & Co. | |
| do. | | | 1 | | 1847 | " | 2 | " | " | |
| Luzerne, | | | | 1 | 1842 | Lackawanna, | 1 | Scrantonia, | Scrantons & Platt, | |
| do. | | | 1 | | 1849 | " | 2 | " | " | |
| do. | | | 1 | | 1849 | " | 3 | " | " | |
| do. | | | | 1 | 1847 | Jim Crack, | | Wilkesbarre, | H. B. Renwick, | |
| Lebanon, | | | | 1 | 1847 | Lebanon, | 1 | Lebanon, | R. & G. D. Coleman, | |
| do. | | | 1 | | 1848 | " | 2 | " | " | |
| do. | | 1 | | | 1850 | Cornwall, | | Cornwall, | R. W. & W. Coleman, | |
| Lancaster, | | | 1 | | 1848 | Safe Harbor, | | Safe Harbor, | Reeves, Abbott & Co. | |
| do. | 1849 S | | | 1 | 1844 | Shawnee, | | Columbia, | Wright & Nephew, | |
| do. | 1849 S | | 1 | | 1848 | Cordelia, | | " | Bryan & Longnecker, | |
| do. | 1842 S | | | 1 | 1841§ | Sarah Ann, | | " | Jno. B. Hertzler, | D. R |
| do. | | | 1 | | 1845 | Henry Clay, | | " | Jno. Haldeman, | No |
| do. | | | 1 | | 1846 | Chickiswalungo, | | " | E. Haldeman & Co. | |
| do. | | | | 1 | 1847 | Donegal, | | " | Eckert & Stein, | |
| do. | | | 1 | | 1849 | Marietta, | | " | Shoenberger & Musselman, | |
| do. | | 1 | | | 1850 | " | | " | " | |
| Montgomery, | | | 1 | | 1845 | Plymouth, | | Conshohocken, | S. Colwell, | |
| do. | | | 1 | | 1848 | Merion, | | " | Colwell & Co. | |
| do. | | | | 1 | 1844 | Spring Mill, | | " | Est. Farr & Kunzi, | D. R |
| do. | | | | 1 | 1850 | Swede, | | Philadelphia, | Potts & Jones, | No |
| do. | 1849 S | | | 1 | 1845 | Wm. Penn, | | Conshohocken, | Hitner, Reeves & Co. | |
| Northumberland, | | | 1 | | 1846 | Chulasky, | | Chulasky, | S. R. Wood, | |
| do. | 1846 S | | | 1 | 1842 | Shamokin, | | Shamokin, | Claghorn, Richards & Co. | |
| Northampton, | 1849 S | | 1 | | 1842 | S. Easton, | | Easton, | Thomas & Mills, | |
| do. | | | | 1 | 1844 | Glendon, | 1 | " | Chas. Jackson, Jr. | |
| do. | | | 1 | | 1845 | " | 2 | " | " | |
| do. | | 1 | | | 1850 | " | 3 | " | " | |
| Schuylkill, | 1849 S | | 1 | | 1838 | Pioneer, | | Pottsville, | The Greenwood Co. | Patter |
| do. | | 1 | | | | St. Clair, | | St. Clair, | Burd Patterson, | No |
| | 14 | 5 | 29 | 23 | | | | | | |

* In the column of Ores, H. signifies Brown Hematite; M., Magnetic; F

† Altered from Charcoal 1839. ‡ Altered from Charcoal 1848

# LAST FURNACES in the State of Pennsylvania, in the year 1850.

| | LESSEES. | * Kind of Ore used. | Largest Product. Tons. | Actual make 1849. Tons. | No. men and boys employed. | No. oxen, horses and mules employed. | BLAST. Heat. | Tuyeres. No. | Tuyeres. Diam. | BLAST. Pres'e. | STACK. Bosh. feet. | STACK. Height. feet. | Kind of Power used, and No. | Kind of Metal made, and No. | Annual Capacity. Tons. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | None. | H. M. | 3,484 | 3,250 | 50 | 35 | 500° | 3 | 3 | 3a4 | 14 | 37 | Steam. | 1 | 3,500 |
| | " | " | 3,840 | 3,840 | 103 | 32 | 500 | 3 | 3 | 3 | 13 | 40 | " | 2, 3 | 8,000 |
| | " | F. | 3,135 | | 70 | 5 | 612 | 3 | 2¾ | 4 | 9 | 31 | " | 3 | 3,150 |
| | " | " | 4,042 | | 70 | 5 | " | 3 | " | 4½ | 12 | 33 | " | 3 | 4,100 |
| | " | " | 3,523 | 1,953 | 70 | 5 | " | 3 | " | " | " | " | " | 3 | 4,100 |
| | " | " | 6,449 | 6,449 | 70 | 5 | " | 4 | " | 4⅜ | 14 | 34 | " | 3 | 6,500 |
| | " | " | 1,000 | 200 | 45 | 25 | " | 3 | 4 | 2 | 8 | 30 | " | 2, 3 | 2,000 |
| | " | " | 2,000 | | 45 | 45 | " | 3 | 3 | 3 | 8½ | 32 | Water. | 1, 2 | 2,000 |
| | J. P. & J. Grove, | " | 2,500 | 1,600 | 50 | 20 | " | 3 | 2½ | 5 | 8½ | 30 | Steam. | 1, 2 | 2,500 |
| | None. | " | 10,200 | 8,132 | 180 | 80 | 550 | 3 | 3¼ | 2½ | 14 | 35 | Water. | 2, 3 | 10,200 |
| | " | " | 1,200 | 800 | 40 | 25 | 500 | 3 | 3 | 1½ | 8 | 30 | " | 2, 3 | 2,000 |
| | " | " | 1,000 | 550 | 40 | 20 | " | 3 | 2½ | 1¾ | 9 | 32 | " | 2, 3 | 2,000 |
| | " | H. M. | 1,500 | 1,500 | 53 | 8 | " | 3 | 3 | 3 | 8½ | 34 | " | 1, 2 | 2,000 |
| | " | " | 4,052 | | | | | | | | 8 | 28 | " | | 2,000 |
| | " | " | | 1,534 | | | 612 | 3 | 3 | 4 | 12 | 38 | Steam. | 2, 3 | 4,100 |
| | " | " | 3,910 | 3,910 | 371 | 114 | 612 | 3 | 3 | 4 | 12 | " | " | 2, 3 | 4,100 |
| | " | " | 4,718 | 2,581 | | | " | 3 | 3 | 4 | 14 | " | " | 2, 3 | 5,000 |
| | " | H. | 3,614 | 3,360 | 71 | 48 | " | 3 | 3½ | 3¾ | 12 | 35 | " | 1, 2 | 3,800 |
| | " | " | 600 | | 30 | 7 | " | 3 | 2⅝ | 2½ | 8 | " | S & W. | " | 2,000 |
| | " | H. M. | 3,958 | 3,639 | | 300 | " | 3 | 3 | 4 | 11 | 45 | Water. | " | 4,000 |
| | " | " | 4,833 | 4,494 | 500 | | " | 4 | " | " | 13 | " | " | " | 5,000 |
| | " | " | 7,144 | 6,139 | | | " | 6 | " | " | 17 | " | Steam. | " | 7,200 |
| | " | " | | | | | " | 7 | " | " | 18 | 40 | " | " | 8,000 |
| | " | " | | | | | " | 7 | " | " | 18 | " | " | " | 8,000 |
| | " | " | 5,000 | 4,200 | 200 | 250 | " | 3 | 2¾ | 2½a3 | 12 | 35 | " | " | 5,000 |
| | " | " | 5,000 | 4,200 | | | " | 3 | " | 2½a3 | 12 | 35 | " | " | 5,000 |
| | " | F. C. | 1,800 | 1,800 | | 225 | 450 | 3 | 2½ | 2 | 11 | 33 | Water. | 3 | 2,000 |
| | " | " | 300 | 300 | 500 | | " | 3 | 3½ | 2½ | 14 | 35 | Steam. | 3 | 3,500 |
| | " | " | 300 | 300 | | | " | 3 | 3½ | " | 14 | 35 | " | 3 | 3,500 |
| | " | F. | 1,300 | | 50 | 20 | " | 3 | 2½ | 1 | 9 | 33 | " | 3 | 1,500 |
| | " | M. | 3,778 | 3,659 | 213 | 100 | " | 3 | 4 | 4 | 14 | 35 | " | 1, 2, 3 | 6,000 |
| | " | " | 3,354 | 3,188 | | | " | 3 | 5 | 4 | 12 | 35 | " | " | 5,000 |
| | " | " | | | | | " | 3 | 4 | | 12 | 38 | " | " | 5,000 |
| | " | H. | 2,879 | 2,879 | 100 | 34 | " | 6 | 3¼ | 3¾ | 14 | 45 | " | 3 | 5,000 |
| | " | " | 1,000 | | 28 | 60 | " | 2 | 4 | | 8 | 28 | " | 1, 2 | 2,000 |
| | " | " | 700 | 250 | 28 | 71 | 612 | 3 | 3 | | 8½ | 31 | " | " | 2,000 |
| | D. R. Porter, | " | 1,664 | 200 | 24 | 30 | " | 3 | 3 | 3¼ | 8 | 30 | " | " | 2,000 |
| | None. | " | 2,678 | 2,159 | 50 | 36 | " | 3 | 3½ | 2¾ | 9 | 35 | " | " | 2,800 |
| | " | " | 2,464 | 1,500 | 45 | 40 | " | 3 | 3 | 2½ | 8 | 32 | " | 1, 2, 3 | 2,500 |
| | " | " | 3,472 | 3,472 | 46 | 44 | " | 3 | 3 | 4 | 10 | 35 | " | " | 3,800 |
| an, | " | " | 3,763 | 3,763 | 58 | 45 | " | 3 | 3½ | 3½ | 10 | 33 | " | " | 3,800 |
| | " | " | | | | | " | 3 | " | " | 10 | 33 | " | " | 3,800 |
| | " | " | 3,338 | 2,492 | 185 | 40 | " | 3 | 3 | 3 | 11 | 36 | " | 1, 2 | 3,350 |
| | " | " | 3,174 | 3,174 | 120 | 40 | " | 3 | 3 | 3½ | 14 | 38 | " | " | 3,500 |
| | D. Reeves, | " | 1,000 | | 100 | 40 | " | 3 | 3 | 4 | 12 | 40 | " | 3, 4 | 4,000 |
| | None. | " | | | 110 | 20 | " | 6 | 2½ | 4 | 14 | 42 | " | 1, 2 | 4,000 |
| | " | " | 3,120 | 2,044 | 95 | 42 | " | 6 | 2¼ | 2½ | 13 | 33 | " | " | 3,500 |
| | " | F. | 4,000 | 3,500 | 65 | 50 | " | 3 | 4 | 3½ | 14 | 34 | " | 2, 3 | 4,500 |
| o. | " | C. B. F. | 1,380 | | 40 | 25 | " | 3 | 3 | 4¼ | 12 | 45 | " | 1, 2 | 3,500 |
| | " | H. M. | 3,140 | 3,140 | 50 | 20 | " | 3 | 2¾ | 3½ | 11 | 37 | Water. | " | 3,500 |
| | " | " | 3,978 | 3,978 | 200 | 90 | 500 | 3 | 3 | 3 | 10 | 45 | " | 1, 2, 3 | 4,000 |
| | " | " | 6,253 | 4,469 | | | " | 4 | " | " | 12 | 45 | " | " | 6,300 |
| | " | " | | | | | " | 5 | " | " | 12 | 35 | Steam. | " | 6,300 |
| | Patterson, Richards & Co. | H. C. | 1,742 | 570 | 60 | 25 | 612 | 3 | 3 | 4 | 9 | 34 | " | 1 | 2,000 |
| | None. | C. | | | | | " | 3 | | | 14 | 32 | " | 1, 2 | 3,500 |
| | | | 151,331 | 109,168 | 4,225 | 2,126 | | | | | | | | | 221,400 |

Magnetic; F., Fossiliferous Red Oxyde; C., Carbonate; B., Bog Ore.

Charcoal 1848. § Altered from Charcoal 1845.

| COUNTY. | Sold by Sheriff, or failed. | No. Furnaces. In Blast. | No. Furnaces. Out Blast. | Date of construction. | NAME OF WORKS. | SITUATION. POST OFFICE. | OWNERS. |
|---|---|---|---|---|---|---|---|
| Blair, | 1849 S | | 1 | 1836 | Elizabeth, | Frankstown, | Samuel Good & Co. |
| do. | | 1 | | 1815 | Springfield, | Springfield Furnace, | Royer & Co. |
| do. | 1850 S | | 1 | 1846 | Gap, | E. Freedom, | Ed. F. Shoenberger, |
| do. | | 1 | | 1811 | Alleghany, | Hollidaysburg, | Elias Baker, |
| do. | | 1 | | 1846 | Blair, | Collinsville, | H. McNeall, |
| do. | | | 1 | 1832 | Elizabeth, | Antestown, | Martin Bell, |
| do. | 1850 F | 1 | | 1805 | Ætna, | Yellow Spring, | Spang, Keller & Co. |
| do. | 1850 F | | 1 | 1837 | Canoe, | Williamsburg, | " |
| Bedford, | S | | 1 | 1800 | Hopewell, | Hopewell, | McDowell, Benedict and others, |
| do. | | | 1 | 1846 | Hanover, | McConnelsburg, | John Potts, |
| Berks, | 1842 F | 1 | | 1777 | Reading, | Furnace, | H. P. Robeson & Co. |
| do. | | 1 | | 1846 | Hampton, | Hampton, | E. & George Brooke, |
| do. | | 1 | | 1836 | Alsace, | Reading, | Clymer, Kaufman & Co. |
| do. | 1842 S | 1 | | 1820 | Windsor, | Mohrsville, | Darraeh & Jones, |
| Carbon, | | 1 | | 1834 | Maria, | Lehighton, 2 m. | Thos. M. Smith & Est. T. S. Richar |
| do. | | | 1 | 1837 | Pennsville, | E. Penn, | S. Balliet & Co. |
| Cumberland, | 1837 S | 1 | | 1770 | Pine Grove, | Carlisle, | Wm. M. Watts, |
| do. | 1849 S | | 1 | 1795 | Holley, | Papertown, | Farmers and Mechanics Bank, |
| Columbia, | 1848 S | | 1 | 1839 | Liberty, | Mooresburg, | Trustees U. S. Bank, |
| do. | | 1 | | 1836 | Esther, | Catawissa, 3½, | S. B. Deemer, |
| do. | | 1 | | 1845 | Penn, | Catawissa, ¾, | Fincher & Thomas, |
| do. | 1849 S | | 1 | 1837 | Briar Creek, | Berwick, 2, | Charles Kalbfus, |
| Centre, | | 1 | | 1790 | Centre, | Bolesberry, | Thompson, McCoy & Co. |
| do. | 1849 S | | 1 | 1826 | Hecla, | Zion, | Boyd & Cummings, |
| Clearfield, | | | 1 | 1815 | Karthaus,* | K., | P. A. Karthaus, Jr. |
| Clinton, | 1849 S | 1 | | 1830 | Mill Hall, | Mill Hall, | Wharton, Morris & Co. |
| do. | | | 1 | 1811 | Washington, | Kittany, | John Henderson, |
| do. | | | 1 | 1834 | Farrandsville,* | Farrandsville, | John O. Stearns, |
| Dauphin, | 1847 S | | 1 | 1830 | Victoria, | Dauphin, | A. C. Bayard, |
| do. | | 1 | | 1837 | Manada, | W. Hanover, | E. & C. B. Grubb, |
| Franklin, | 1842 F | 1 | | 1805 | Montalto, | Montalto, | H. & H. Hughes, |
| do. | | 1 | | 1837 | Caledonia, | Grafenburg, Adams Co. | Thaddeus Stevens, |
| Huntingdon, | 1849 S | 1 | | 1844 | Monroe, | Pine Crove, Centre Co. | James Irvin, |
| do. | S | 1 | | 1838 | Mill Creek, | Mill Creek, | Irvin, Green & Co. |
| do. | S | 1 | | 1816 | Union, | Spruce Cr., | Wallace's Heirs, |
| do. | | | 1 | 1796 | Huntingdon, | Warrior's Mark, | George K. Shoenberger, |
| do. | | 1 | | 1839 | Edward, | Vineyard Mills, | Samuel H. Bell, |
| do. | S | | 1 | 1832 | Winchester, | Orbisonia, | T. T. Cromwell, |
| do. | S | 1 | | 1830 | Rockhill, | " | Isett, Wighton & Co. |
| do. | S | | 1 | 1837 | Chester, | " | Pennock's Heirs, |
| do. | | 1 | | 1849 | Rough and Ready, | Coffee Run, | James Entricken, |
| Lehigh, | | | 1 | 1826 | Lehigh, | N. Whitehall, | S. Balliet & Co. |
| Lycoming, | 1843 S | | 1 | 1837 | Ralston, | Ralston, | Lycoming Valley Iron Co. |
| Luzerne, | | 1 | | 1846 | Shickshinny, | Shickshinny, | Wilson & Koons, |
| Lancaster, | | 1 | | 1756 | Elizabeth, | Brickerville, | R. & G. D. Coleman, |
| do. | | 1 | 1 | 1832 | Rock,† | Peningtonville, | Charles Brooks, Jr., & Co. |
| do. | | | 1 | 1800 | Mount Vernon, | Elizabethtown, | E. & C. B. Grubb, |
| do. | | 1 | | 1809 | Conowingo, | Buck, | James M. Hopkins, |
| Mifflin, | | | 1 | 1846 | Isabella, | Lewistown, | A. B. Long, |
| do. | S | | 1 | 1810 | Hope, | Lewistown, 6 m. | D. W. Hewling, |
| do. | 1849 S | | 1 | 1838 | Brookland, | Waynesburg, | H. N. Burroughs, |
| do. | 1847 F | | 1 | 1838 | Matilda, | Jackstown P. O. Huntingd'n Co. | J. F. Cottrell, |
| Perry, | 1847 S | | 1 | 1840 | Perry,‡ | Bloomfield, | Loy, Everhart & Co. |
| do. | 1849 S | | 1 | 1808 | Juniata, | Newport, 3 m. | Cathcart & Co. |
| do. | | | 1 | 1836 | Montebello, | Duncannon, | Fisher, Morgan & Co. |
| Schuylkill, | | 1 | | 1830 | Swatara,§ | Pine Grove, 6 m. | Eckert & Guilford, |
| do. | | 1 | | 1835 | Stanhope, | Pine Grove, 2 m. | W. S. & J. R. Breitenbach, |
| Tioga, | 1849 F | 1 | | 1841 | Blossburg, | Blossburg, | James H. Gulick, |
| Union, | S | | 1 | 1827 | Berlin, | Hartleytown, 4 m. | C. & C. Brooke, |
| do. | 1848 S | | 1 | 1846 | Forest, | Milton, 6 m. | Kaufman, Reber & Co. |
| do. | | 1 | | 1848 | Beaver, | Middleburg, | Middleswarth, Kerns & Co. |
| York, | 1842 S | | 1 | 1823 | Margaretta, | Margaretta, | Hahn & Himes, |
| do. | | | 1 | 1827 | Manor, | Chanceford, | John Herr, |
| do. | | | 1 | 1830 | York, | Chanceford, | John Bair, |
| do. | | | 1 | 1836 | Codorus, | Manchester, | E. & C. B. Grubb, |
| do. | 1842 S | | 1 | 1842 | Woodstock, | Margaretta, | Hahn & Himes. |
| | 32 | 31 | 36 | | | | |

* Built for a Coke Furnace. † Now running Cold Blast.

# HARCOAL FURNACES IN EASTERN PENNSYLVANIA, in the year 1850.

| | LESSEES. | Kind of Ores used. | Largest Product. Tons. | Actual make in 1849. Tons. | No. of men and boys employed. | No. oxen, horses and mules employed. | BLAST. Heat. | Tuyeres No. | Tuyeres Diam. | Pressure. | STACK. Bosh. feet. | STACK. Height. feet. | Kind of Power used. | Kind of Metal made. No. | Market for sales. | Capacity. Tons. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | F. | 1,000 | | 100 | 25 | Hot. | 2 | | | 8½ | 32 | W.&S. | 3 | W. | 1,600 |
| | | F. & H. | 1,820 | 1,560 | 80 | 50 | " | 2 | | | 8 | 30 | Water. | 3 | " | 1,820 |
| | | F. & H. | 1,260 | 1,260 | 45 | 43 | " | 1 | 2½ | | 8½ | 32 | " | 3 | " | 1,600 |
| | | H. | 1,751 | 1,062 | 80 | 60 | " | 2 | 2½ | | 9 | 32 | " | 1, 2, 3 | " | 1,800 |
| | | F. & ½ H. | 911 | 911 | 76 | 27 | " | 2 | 2½ | | 8 | 36 | Steam. | 3 | W. & H. | 1,400 |
| | | H. | 883 | 554 | 50 | 20 | " | 2 | 2½ | | 8½ | 34 | Water. | 3 | W. | 1,600 |
| | | F. H. | 1,000 | 1,000 | 100 | 38 | " | 1 | 2¼ | | 8 | 31 | " | 3 | " | 1,400 |
| | | H. | 1,180 | | | | " | 2 | 2¼ | | 8 | 31 | Steam. | 3 | " | 1,400 |
| d others, | | F. | 500 | 300 | 50 | 20 | " | 1 | | | 7 | 32 | Water. | 3 | E. & W. | 1,000 |
| | | H. | 300 | | 50 | 25 | " | 2 | 2½ | | 7 | 30 | " | | H. | 1,000 |
| | | M. | 2,200 | 1,800 | 100 | 80 | " | 2 | 2 | 1½ | 9 | 30 | " | 2, 3 | | 2,200 |
| | | M. | 1,550 | 1,550 | 50 | 30 | " | 2 | 2¾ | 1 | 7½ | 30 | " | 2, 3 | | 1,200 |
| . | | H. | 850 | 450 | 40 | 40 | " | 1 | 2 | | 7½ | 30 | " | 1, 2, 3 | | 1,550 |
| | | H. | 1,200 | 900 | 50 | 50 | " | 2 | 3 | | 7½ | 30 | " | | | 1,200 |
| T. S. Richards, | | H. | 2,059 | 1,884 | 153 | 58 | 600° | 1 | | 3 | 8 | 30 | " | 1 | | 2,060 |
| | | H. | 780 | 624 | 61 | 55 | 500° | 1 | 2¼ | | 7 | 30 | " | 1 | | 1,000 |
| | | H. | 1,600 | 590 | 61 | 41 | Warm | 2 | 2½ | | 8 | 33 | " | 1 | | 1,600 |
| Bank, | | M. & H. | 800 | 350 | 70 | 40 | " | 2 | 2½ | | 8 | 33 | " | 2, 3 | | 1,400 |
| | | F. | 1,000 | | 80 | 30 | Hot. | 2 | 2½ | | 8 | 30 | Steam. | 1, 2 | | 1,400 |
| | | F. | 1,600 | 900 | 60 | 50 | " | 2 | 2½ | | 7½ | 30 | Water. | 2, 3 | | 1,600 |
| | | F. | 854 | 854 | 70 | 60 | " | 2 | 3 | | 7½ | 29 | " | 2, 3 | | 1,200 |
| | | F. | 680 | 275 | 30 | 15 | " | 2 | 2¼ & 2¾ | | 7 | 27 | " | 2, 3 | | 1,000 |
| o. | | H. | 1,400 | 1,200 | 75 | 50 | " | 2 | 3 | | 8 | 30 | " | 3 | | 1,400 |
| | | H. | 1,000 | | 60 | 18 | " | 1 | 2½ | | 8 | 30 | " | 3 | | 1,400 |
| | | C. | 1,820 | | 120 | 20 | 400° | 3 | 2½ | 2 | 12 | 45 | " | 3 | | 2,000 |
| | | H. | 1,360 | 1,360 | 70 | 45 | Hot. | 2 | 4 | | 8½ | 28 | " | 2, 3 | | 1,600 |
| | W. Morris & Co. | H. | 1,100 | | 70 | 45 | " | 1 | | | 8 | 30 | " | 2, 3 | | 1,400 |
| | | F. | 1,100 | | 70 | 25 | " | 2 | | | 10 | 45 | " | 2, 3 | | 2,000 |
| | | H. | 2,200 | | 90 | 80 | " | 2 | 2½ & 3 | | 9 | 45 | " | 1, 2 | | 2,200 |
| | Grubb & Kintzer. | M. | 2,215 | 1,800 | 106 | 70 | 600° | 2 | 2¼ | 1¾ | 8½ | 32 | " | 3 | | 2,215 |
| | | H. | 1,000 | 1,000 | 150 | 30 | Hot. | 2 | 2½ *a* 3 | | 9 | 33 | " | 2, 3 | | 1,800 |
| | | H. | 800 | 750 | 80 | 34 | " | 2 | 2 *a* 3 | | 8 | 33 | " | | | 1,400 |
| | | H. & F. | 900 | 900 | 60 | 30 | " | 2 | 2 | | 9 | 33 | " | 1, 2, 3 | | 1,800 |
| | G. W. Patton & Co. | ⅔ H. & ⅓ F. | 1,367 | 1,367 | 70 | 40 | " | 1 | 2¾ | | 8 | 30 | " | 3 | E. & W. | 1,400 |
| | | H. | 1,200 | 800 | 60 | 25 | " | 1 | 2½ | | 8 | 30 | " | 2, 3 | E. & W. | 1,400 |
| | | H. | 1,650 | 1,100 | 130 | 50 | " | 1 | 2½ | | 8½ | 33 | " | 3 | W. | 1,650 |
| | | F. & H. | 960 | 575 | 50 | 36 | " | 2 | 2 | | 8½ | 32 | " | 2, 3 | W. | 1,600 |
| | J. Wigton & Co. | H. | 500 | 500 | 40 | 30 | " | 1 | 2½ | | 8 | 28 | " | 2, 3 | W. | 1,400 |
| | | F. & H. | 850 | 850 | 40 | 34 | " | 2 | 2½ | | 8 | 30 | " | 3 | E. | 1,400 |
| | | H. | 500 | | 80 | 24 | " | 2 | | | 9 | 45 | S.&W. | 2, 3 | E. | 1,800 |
| | Wigton & Moore. | F. & ½ H. | 357 | 357 | 48 | 27 | " | 2 | 2½ | | 9 | 32 | Water. | 3 | E. | 1,800 |
| | | H. | 1,430 | 1,204 | 90 | 60 | 500° | 1 | 2¾ | | 7½ | 31 | " | 1 | | 1,200 |
| o. | | C. | 1,000 | | 44 | 37 | 600° | 3 | 3¼ | | 10 | 35 | " | 2 | | 2,000 |
| | | F. | 1,600 | 1,600 | 62 | 24 | Hot. | 2 | 2 | | 9 | 30 | " | 1, 2 | | 1,800 |
| o. | | M. | 1,900 | 1,500 | 60 | 50 | 460° | 2 | 1½ | 1 | 9 | 29 | S.&W. | 1, 2, 3 | | 1,900 |
| | | H. | 1,156 | 1,051 | 100 | 90 | " | 2 | 2 | 1½ | 8½ | 29 | " | 1, 2, 3 | | 1,200 |
| | | M. | 1,300 | | 100 | 30 | | 2 | 2¼ | | 8 | 32 | " | 2, 3 | | 1,400 |
| | | H. | 1,300 | 870 | 100 | 75 | 212° | 1 | 3 | | 7½ | 30 | " | 1, 2 | | 1,200 |
| | | F. & H. | 1,300 | | 55 | 40 | Hot. | 2 | 2¾ | | 9 | 30 | " | 1, 2 | E. | 1,800 |
| | | F. & H. | 1,000 | 1,000 | 55 | 30 | " | 2 | 2½ | | 8½ | 31 | " | | | 1,600 |
| | | H. | 1,200 | | 100 | 40 | " | 2 | 3 | | 8 | 32 | " | 2, 3 | E. | 1,400 |
| | | F. | 1,200 | 800 | 60 | 30 | " | 2 | 2½ | | 8 | 33 | Steam. | 1, 2 | E. | 1,400 |
| | | F. & H. | 500 | | 40 | 35 | " | 1 | | | 7 | | Water. | 1, 2 | | 1,000 |
| | | F. & H. | 800 | 400 | 50 | 30 | " | 2 | | | 8 | | " | 1, 2 | | 1,400 |
| | | F. | 1,449 | 1,185 | 70 | 35 | " | 2 | 1½ | | 8½ | 32 | " | 2, 3 | | 1,600 |
| | | M. | 1,880 | 1,300 | 103 | 33 | Cold. | 2 | 2¼ | | 9 | 32 | " | 1, 2 | | 1,880 |
| h, | | H. | 788 | 788 | 65 | 38 | Hot. | 1 | 2¼ | | 7½ | 30 | " | 1, 2 | | 1,200 |
| | | F. C. B. | 700 | 700 | 40 | 16 | 400° | 1 | 4 | | 7½ | 31 | " | 1, 2 | | 1,200 |
| | | F. | 900 | | 60 | 30 | Hot. | 2 | | | 8 | 31 | " | 2, 3 | | 1,400 |
| | | F. | 700 | | 36 | 20 | " | 2 | | | 9 | 30 | " | 1, 2 | | 1,800 |
| Co. | | F. | 1,200 | 1,200 | 50 | 36 | " | 2 | 2¾ | | 8½ | 30 | " | 1, 2 | | 1,600 |
| | Curran, Himes & Co. | H. | 1,100 | 745 | 100 | 30 | " | 2 | 2 & 3 | | 7 | 32 | Steam. | 1, 2 | | 1,200 |
| | | H. | 1,000 | 100 | 80 | 40 | " | 1 | 2 | | 8 | 32 | Water. | 1, 2 | | 1,400 |
| | | H. | 1,000 | 700 | 80 | 30 | " | 2 | 2½ | | 9 | 32 | " | 1, 2 | | 1,800 |
| | | H. | 2,400 | 1,900 | 100 | 30 | " | 2 | 3 | | 8 | 32 | " | 1, 2 | | 1,400 |
| | Curran, Himes & Co. | H. | 1,000 | | 75 | 20 | " | 2 | | | 10 | 40 | " | | | 2,000 |
| | | | 77,860 | 46,336 | 4,694 | 2,499 | | | | | | | | | | 101,475 |

ld Blast. ‡ Abandoned. § Blast now running Cold, have a Hot.

## A Detailed Statement of all the COLD BLAST CHARCOAL FURNA

| COUNTY. | Sold by Sheriff, or failed. | No Furnaces. In Blast | No Furnaces. Out Blast. | Date of construction. | NAME OF WORKS. | SITUATION. POST OFFICE. | OWNERS. | |
|---|---|---|---|---|---|---|---|---|
| Adams, . . | | | 1 | 1830 | Chesnut Grove, | Whitestown, | J. V. Boggs, | No |
| Blair, . . | | 1 | | 1824 | Bald Eagle, | Warrior's Mark, Huntingd'n Co. | Lyon, Shorb & Co. | |
| do. | | 1 | | 1819 | Rebecca, | Martinsburg, | D. P. Schoenberger, | |
| do. | | 1 | | 1846 | Bloomfield, | Sarah, | " | |
| do. | | 1 | | 1833 | Sarah, | " | " | |
| Bedford, . . | 1848 S | | 1 | 1841 | Lemnos, | Hopewell, | Thos. King & Co. | |
| Berks, . . | | 1 | | 1759 | Hopewell, | Douglasville, | Clement, Brooke & Co. | |
| do. | | 1 | | 1816 | Mossilm, | Mossilm, | N. V. R. Hunter, | F. S. H |
| do. | | 1 | | 1793 | Joanna, | Joanna, | Darling & Smith, | |
| do. | | 1 | | 1827 | Mount Penn, | Reading, 4 m. | John Schwartz, | |
| do. | | 1 | | 1797 | Mary Ann, | Long Swamp, | Hort. Trexler, | |
| do. | | 1 | | 1791 | Sally Ann, | New Jerusalem, | J. V. R. Hunter, | |
| do. | | | 1 | 1835 | Oley, | Oley, | Jacob S. Spang, | |
| do. | 1842 S | | 1 | before 1770 | Old Oley, | Pricetown, | George Merkel, | |
| Cumberland, . | 1846 S | | 1 | 1826 | Mary Ann, | Shippensburg, | Carlisle Bank, | |
| do. | 1846 S | | 1 | 1828 | Augusta, | " | J. M. Haldeman, | |
| do. | 1847 S | | 1 | 1815 | Carlisle, | Carlisle, | Peter F. Ege, | |
| do. | 1849 F | | 1 | 1794 | Cumberland, | Dickinson, | Thomas C. Miller, | |
| do. | 1847 S | | 1 | 1836 | Big Pond, | Shippensburg, | Schoch, Sons & Co. | |
| Columbia, . . | 1847 S | 1 | | 1815 | Catawissa, | Maineville, | B. P. Frick, | |
| Centre, . . | 1843 S | | 1 | 1832 | Martha, | Martha Furnace P. O. | Rowland Curtin & Sons, | |
| do. | 1843 S | 1 | | 1848 | Eagle, | Milesburg, | C. & J. Curtin, | |
| do. | | 1 | | 1800 | Logan, | Bellefonte, | Valentines & Thomas, | |
| do. | 1850 F | 1 | | 1816 | Rock, | Bellefonte, 5 m. | Samuel Edmiston, | |
| do. | 1844 S | | 1 | 1828 | Hannah, | Centre Line, | Lyon, Shorb & Co. | Campbe |
| do. | 1849 S | | 1 | 1835 | Juliana, | Juliana, | John Adams, | |
| do. | | 1 | 1 | 1830 | Howard, | Howard, | Irvin, Thomas & Co. | |
| Clinton, . . | 1839 S | | 1 | 1834 | Sugar Valley, | Loganville, | J. T. Hale, | |
| do. | 1839 S | | 1 | 1831 | Lamar, | Salona, | Solomon McCormick, | |
| Chester, . . | | 1 | | 1835 | Isabella, | Rockville, | David Potts & Co. | |
| do. | | 1 | | 1736 | Warwick, | Pottstown, | David Potts, Jr. | |
| Dauphin, . . | 1847 S | 1 | | 1849 | Middletown, | Middletown, | Peters & Gamber, | Grubb & |
| do. | 1847 S | 1 | | 1833 | " | " | " | " |
| Franklin, . . | 1849 S | 1 | | 1800 | Carrick, | Faussetsburg, 4 m. | N. Kelley, | Witherc |
| do. | 1849 S | | 1 | 1830 | Southampton, | Shippensburg, 3½, | Alfred Bujac, | |
| do. | 1849 S | | 1 | 1835 | Mary, | " 4, | " | |
| do. | | | 1 | 1828 | Franklin, | St. Thomas, 4, | B. Phreaner & Sons, | |
| do. | | | 1 | 1825 | Valley, | Louden, 2, | John Beaver, | Scheffle |
| do. | | | 1 | 1835 | Warren, | Sylvan, | Bowers' heirs, | |
| Huntingdon, . | 1849 S | | 1 | 1846 | Rebecca, | McElavey Fort P. O. | A. G. Curtin, | |
| do. | | 1 | | 1813 | Pennsylvania, | Baileysville, | Lyon, Shorb & Co. | |
| do. | 1847 S | 1 | | 1833 | Greenwood, | 14 miles from Lewistown, | John A. Wright & Co. | |
| do. | 1848 S | | 1 | 1846 | Malinda, | Orbisonia, | Blair & Madden, | |
| do. | | 1 | | 1829 | Paradise, | Paradise Furnace, | H. Trexler & Co. | |
| do. | 1849 S | | 1 | 1838 | Jackson, | McElavey Fort, | Mitchell, Vance & Alexander, | |
| Lehigh, . . | 1850 S | | 1 | 1800 | Hampton, | Lionsville, | Seyfert, McManus & Co. | |
| Lycoming, . . | | 1 | | 1838 | Heshbon, | Newberry, | Wm. McKinney, | |
| do. | | | 1 | 1820 | Pine Creek, | Jersey Shore, 4 m. | J. Vickers, | |
| Lancaster, . . | | 1 | | 1785 | Mount Hope, | Mount Hope, | E. & B. Grubb, | |
| do. | | | 1 | 1846 | Lancaster, | Lancaster, | George Ford, | |
| Lebanon, . . | | 1 | | 1745 | Cornwall, | Cornwall, | R. W. Coleman, | |
| do. | | 1 | | 1745 | Colebrooke, | Elizabethtown, Lancaster Co. | Wm. Coleman, | |
| do. | | | 1 | 1837 | Monroe, | Fredericksburg, | Jonathan Seidel, | Seidel & |
| Mifflin, . . | | | 1 | 1830 | Marion, | Perryville, | W. & T. Reed, | |
| Montgomery, . | | | 1 | 1836 | Green Lane, | Sumneytown, | Wm. Schall, | |
| Northumberland, | 1848 S | | 1 | 1847 | Paxinas, | Paxinas, | Taggert & Co. | |
| Perry, . . | 1841 S | | 1 | 1833 | Caroline, | Bailysburg, | James Bailey, | |
| do. | | | 1 | 1830 | Oak Grove, | Landisburg, | Thudium & Co. | |
| Schuylkill, . | | | 1 | 1840 | Jefferson, | Schuylkill Haven, | David Potts, | |
| | 27 | 27 | 33 | | | | | |

## L FURNACES IN EASTERN PENNSYLVANIA, in the year 1850.

| | LESSEES. | Kind of Ores used. | Largest Product | Actual make in 1849. | No. of men and boys employed | No. oxen, horses and mules employed. | BLAST. | | | | STACK. | | Kind of Power used. | Kind of Metal made. | Market for sales. | Capacity |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | Cold. | Tuyeres | | Pressure. | Bosh feet. | Height feet. | | | | |
| | | | Tons. | Tons. | | | | No. | Diam. | | | | | | | Tons. |
| | None. | M. | 500 | | 56 | 35 | cold | 1 | | | 8 | 32 | Water. | | | 1,100 |
| | | H. | 1,830 | 1,700 | 118 | 40 | " | 1 | 2½ | | 8½ | 34 | " | 3 | W. | 1,830 |
| | | H. | 1,500 | 1,300 | 60 | 50 | " | 1 | " | | 8½ | 32 | " | 3 | W. | 1,500 |
| | | H. | 1,350 | 1,000 | 75 | 32 | " | 1 | " | | 8½ | 30 | Steam. | 3 | W. | 1,350 |
| | | H. | 1,400 | 1,200 | 70 | 55 | " | 1 | " | | 8½ | 32 | Water. | 3 | W. | 1,400 |
| | | ½ F. & H. | 400 | 291 | 74 | 30 | " | 1 | 2½ | | 8½ | 30 | Steam. | 3 | H. & W. | 1,350 |
| | | M. | 1,150 | 1,000 | 80 | 50 | " | 1 | | ¾ | 6½ | 30 | Water. | 1 | E. | 1,150 |
| | F. S. Hunter. | H. | 1,200 | 1,200 | 60 | 54 | " | 1 | 2 | | 8.9 | 32 | " | 2, 3 | " | 1,350 |
| | | M. | 1,050 | 1,050 | 50 | 30 | " | 1 | | | 7.6 | 31 | " | 2, 3 | " | 1,050 |
| | | M. | 1,050 | 897 | 100 | 64 | " | 1 | 2⅛ | | 8 | 31 | " | 2, 3 | " | 1,100 |
| | | M. & H. | 1,000 | 800 | 59 | 35 | " | 1 | 2⅛ | | 7 | 30 | " | 1, 3 | " | 1,000 |
| | | H. | 850 | 750 | 60 | 40 | " | 1 | 2⅛ | | 6 | 32 | " | 1, 2, 3 | " | 850 |
| | | M. & H. | 800 | | 60 | 35 | " | 1 | | ¾ | 6½ | 28 | " | 1 | " | 800 |
| | | M. & H. | 800 | | | | " | 1 | | | 9 | 28 | " | 1 | " | 1,400 |
| | | H. | 800 | | 80 | 25 | " | 1 | 2½ | | 8 | 32 | " | 3 | " | 1,100 |
| | | H. | 800 | | 80 | 25 | " | 1 | 2½ | | 8 | 32 | S.&W. | 3 | " | 1,100 |
| | | H. | 875 | | 56 | 29 | " | 1 | 1¾ | | 7½ | 25 | Water. | 2 | " | 1,000 |
| | | ½ M. & H. | 400 | 247 | 40 | 25 | " | 1 | 2 | | 8½ | 30 | " | 2, 3 | " | 1,350 |
| | | F. & H. | 871 | 871 | 75 | 50 | " | 1 | 2½ | | 7½ | 30 | " | 3 | " | 1,000 |
| | | F. | 750 | 500 | 53 | 50 | " | 1 | 3½ | | 8½ | 32 | " | 1, 2 | " | 1,350 |
| | | H. | 1,180 | | 70 | 60 | " | 1 | 2½ | | 8 | 32 | " | 3 | " | 1,180 |
| | | H. | 800 | 800 | 80 | 45 | " | 2 | 2¼ | | 8 | 30 | " | 3 | " | 1,100 |
| | | H. | 1,320 | 1,320 | 40 | 36 | " | 1 | 3 | ⅜ | 8 | 31 | " | 3 | " | 1,320 |
| | | H. | 700 | 700 | 35 | 36 | " | 1 | 1¾ | | 7 | 28 | " | 3 | " | 900 |
| | Campbell, Stevens & Co. | H. | 1,261 | 800 | 100 | 40 | " | 1 | 2½ | | 8½ | 33 | " | 3 | W. | 1,350 |
| | | H. | 1,000 | 250 | 60 | 30 | " | 1 | 2½ | | 8½ | 33 | " | 3 | E. | 1,350 |
| | | ⅛ F. & H. | 1,400 | 1,400 | 50 | 30 | " | 1 | " | | 8½ | 33 | " | 3 | " | 1,400 |
| | | H. | 400 | | | | " | 1 | | | | | | 1 | " | 800 |
| | | H. | 750 | | | | " | 1 | | | 8 | | " | 2, 3 | " | 1,100 |
| | | M. | 1,000 | 1,000 | 75 | 45 | " | 1 | 2¼ | | 6½ | 33 | " | 2, 3 | " | 1,000 |
| | | M. | 1,400 | 1,100 | 100 | 50 | " | 1 | 2¼ | | 7 | 33 | " | 2, 3 | " | 1,400 |
| | Grubb & Cabean. | M. | | 470 | 70 | 42 | " | 1 | 2 | | 6½ | 30 | " | 1 | " | 800 |
| | " | M. | | | | | " | 1 | 2 | | 8½ | " | " | 1 | " | 1,350 |
| | Witherow & Walker. | H. | 400 | | 10 | 5 | " | 1 | 2½ | | 7½ | 30 | " | 2, 3 | H. | 1,000 |
| | | H. | 900 | | 60 | 33 | " | 1 | 2 | | 9½ | 30 | " | 1, 2, 3 | E. | 1,500 |
| | | H. | 1,100 | 360 | 60 | 33 | " | 1 | 2 | | 9 | 30 | " | 1, 2, 3 | " | 1,400 |
| | | H. | 800 | 110 | | | " | 1 | 1½ | | 9 | 30 | " | 2, 3 | H. | 1,400 |
| | Scheffler & Son. | H. | 300 | 50 | 15 | 6 | " | 1 | 1½ | | 6 | 28 | " | 2, 3 | H. | 800 |
| | | H. | 227 | | 35 | 6 | " | 1 | 1¼ | | 8 | 28 | " | 2 | E. | 1,100 |
| | | F. | 700 | 700 | 40 | 23 | " | 1 | 1¾ | | 6½ | 27 | " | 3 | " | 800 |
| | | H. | 2,309 | 1,792 | 120 | 50 | " | 1 | 2½ | | 8½ | 35 | " | 3 | W. | 2,310 |
| | | H. | 1,069 | 729 | 100 | 67 | " | 1 | 2½ 3 | | 8⅓ | 32.4 | " | 2, 3 | E. | 1,200 |
| | | H. | 350 | | 30 | 20 | " | 1 | 2½ | | 6½ | 28 | " | 2, 3 | " | 800 |
| | | ¾ F. & ¼ H. | 700 | 560 | 35 | 24 | " | 2 | 2 | | 7½ | 33 | " | 2, 3 | " | 1,000 |
| er, | | F. | 350 | | 30 | 18 | " | 1 | 2 | | 6 | 20 | " | 3 | " | 800 |
| | | H. | 650 | | 46 | 26 | " | 1 | 2 | | 9 | 32 | " | 2, 3 | " | 800 |
| | | H. | 550 | 400 | 30 | 30 | " | 1 | 2 | | 6.9 | 25 | " | 3 | E. & H. | 900 |
| | | F. | 1,000 | | 60 | 36 | " | 1 | 2 | | 8 | 30 | " | 1, 2 | H. | 1,100 |
| | | M. | 1,434 | 1,434 | 57 | 48 | " | 1 | 2 | | 6½ | 27 | " | 1, 2 | E. | 1,434 |
| | | H. | 500 | 300 | 16 | 4 | " | 2 | 2½ | | 7½ | 33 | Steam. | 2, 3 | " | 1,000 |
| | | M. | 1,405 | 750 | 60 | 46 | " | 1 | 2 | | 7½ | 30 | S.&W. | 1 | " | 1,400 |
| | | M. | 1,600 | 1,400 | 60 | 60 | " | 1 | 2 | | 9 | 30 | Water. | 1 | " | 1,600 |
| | Seidel & Thompson. | M. | 500 | | 40 | 25 | " | 1 | 2 | | 7 | 30 | " | 1 | " | 900 |
| | | H. | 1,800 | | 80 | 35 | " | 1 | | | | | " | 2, 3 | " | 1,800 |
| | | H. | 450 | | 50 | 18 | " | 1 | 2⅛ | | 7.4 | 33 | " | 2, 3 | " | 900 |
| | | F. | 300 | 300 | 35 | 12 | " | 2 | 2¼ | | 8 | 30 | " | 3 | " | 1,100 |
| | | F. | 750 | 166 | 40 | 10 | " | 1 | 2½ | | 9 | 25 | Steam. | 3 | " | 1,400 |
| | | F. & H. | 800 | | 50 | 12 | " | 1 | | | 8 | | Water. | 1 | " | 1,100 |
| | | M. | 700 | | 40 | 15 | " | 1 | | | 6½ | | " | | | 800 |
| | | | 52,231 | 29,697 | 3,185 | 1,830 | | | | | | | | | | 69,524 |

## A Detailed Statement of all the BLOOMERY FORGES IN EASTE

| COUNTY. | Sold by Sheriff, or failed. | Date of construc-tion. | NAME OF WORKS. | SITUATION. P. O. | | OWNERS. | LESSE |
|---|---|---|---|---|---|---|---|
| Carbon, | | 1830 | Maria, | Lehighton, | | T. M. Smith and Est. of Richards, | None. |
| " | | 1848 | Pine Run, | do. | 5 | J. & D. Lowrey, | " |
| " | | 1820 | Ashland, | Lehigh Gap, | 7 | J. J. Albright, | " |
| " | | 1843 | Anthony's, | do. | 7½ | N. Anthony, | " |
| Monroe, | | 1829 | Analomink, | Stroudsburg, | | John Jordan, Jr., | Jas. Bell, |
| Northampton, | 1847 F | 1805 | Jacobsburg, | Jacobsburg, | | A. Benade, | C. E. Ben |

These six works all use the rich Magnetic Ores from New Jersey, and consume about 3 tons of ore and 15 cords of w for the 12 fires in the State, would give 600 tons of bars, consuming 9000 cords of wood, and 1800 tons of ore.

## A Detailed Statement of the FORGES IN EASTERN PENNSYLVANIA, in the yea

| COUNTY. | Sold by Sheriff, or failed. | Date of construc-tion. | NAME OF WORKS. | SITUATION. P. O. | OWNERS. | No. Pud-dling Fur. | No. Heat-ing Fur. | No. forge fires. | CONS Bitum's Coal. Tons. | Anthra'e Coal. Tons. | Woo Cor |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Berks, | 1848 S | 1846 | Reading, | Reading, | A. Taylor, | | 2 | | | 1000 | |
| Cumberland, | 1849 S | 1848 | Holley, | Papertown, | F. & M. Bank, Philada., | 2 | 1 | | | 800 | |
| Philadelphia, | | 1849 | Kensington, | Kensington, | J. Rowland & Co. | | 1 | | 600 | | |
| " | | 1850 | Oxford, | Frankford, | W. & H. Rowland, | | | 3 | | | 15 |
| | | | | | | 2 | 4 | 3 | 600 | 1800 | 15 |

## N EASTERN PENNSYLVANIA, in the year 1850.

| | LESSEES. | Kind of Power employed. | No. Bloom'y fires. | No. Hammers. | Largest Product. Tons. | Actual make 1849. | Form in which Iron leaves the Works. | Men and boys employed. | Horses, mules and oxen employed. | MARKET. |
|---|---|---|---|---|---|---|---|---|---|---|
| | None. | Water. | 2 | 1 | 10 | 10 | Bars. | 6 | 2 | Home. |
| | " | " | 1 | 1 | 65 | 65 | " | 25 | 12 | " |
| | " | " | 2 | 1 | 80 | 80 | " | 12 | 8 | " |
| | " | " | 2 | 1 | 40 | 40 | " | 12 | 4 | " |
| | Jas. Bell, Jr. | " | 3 | 2 | 280 | 100 | " | 30 | 12 | " |
| | C. E. Benade. | " | 2 | 1 | 70 | 40 | " | 12 | 2 | " |
| | | | 12 | 7 | 545 | 335 | | 97 | 40 | |

5 cords of wood to the ton of bars produced. The average annual capacity is 50 tons per fire, which, re.

## in the year 1850, not properly belonging to either of the other classes.

| CONSUMED. | | | | | Largest Product. | No Furnaces running, 1850. | | Men and boys employed. | Horses, mules and oxen employed. | Description of Iron made. | Kind of Power employ'd | Actual make 1849. | Capacity. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Anthra'e Coal. Tons. | Wood. Cords. | Pig. Tons. | Bloom. Tons. | Scrap. Tons. | Tons. | Puddling | Heating. | | | | | | |
| 1000 | | | 450 | | 400 | | | 14 | 3 | Axles. | Steam. | | 600 |
| 800 | | 1000 | | | 10 | | | 25 | 6 | Blooms. | " | | 800 |
| | | | 500 | 100 | | | 1 | 7 | 1 | Steel plates. | " | | 1000 |
| | 1500 | | | 1000 | | | | 13 | 2 | Saw plates. | " | | 600 |
| 1800 | 1500 | 1000 | 950 | 1100 | 410 | | 1 | 59 | 12 | | | | 3000 |

# A Detailed Statement of the CHARCOAL FORGES IN EASTE

| COUNTY. | Sold by Sheriff, or failed, and date. | Kind of Power used. | Date of construction. | NAME OF WORKS. | SITUATION. P. O. | OWNERS. | |
|---|---|---|---|---|---|---|---|
| Bedford, . . | 1847 S | Water. | 1800 | Hopewell, | Hopewell, | McDowell, Benedict and others, | |
| do. | 1848 S | " | 1808 | Lemnos, | " | Thos. King & Co. | |
| do. | | " | 1813 | Bedford, | " | Swope, Kings & Co. | |
| Berks, . . | | " | 1788 | Rockland, | New Jerusalem, | Abm. De Tuck, | |
| do. | | " | 1803 | Dale, | Dale, | David Schall, | |
| do. | | " | 1799 | Mount Pleasant, | Dale, | A. B. Bechtel, | |
| do. | 1842 S | " | 1837 | Franklin, | Reading, | J. & H. Thompson, | |
| do. | 1848 S | " | 1770 | Green Tree, | " | John W. Burkhart, | |
| do. | | " | 1836 | Exeter, | " | Moyer & Yocum, | G. |
| do. | | " | 1830 | Bloom, | Dale, | Horatio Trexler, | |
| do. | | " | 1797 | District, | Pike Township, | " | |
| do. | | " | 1780 | Birdsboro, | Birdsboro, | E. & G. Brooke, | |
| do. | | " | 1780 | Oley Forge, | Oley Township, | Jacob S. Spang, | |
| do. | | " | 1825 | Dowell, | Robeson, | Jonathan Seidel, | |
| do. | 1842 F | " | 1749 | Charming, | Furnace, | H. P. Robeson & Co. | |
| do. | | " | 1830 | Northkill, | Schattlesville, | Joseph Seyfert, | |
| do. | | " | 1840 | Mount Airy, | " | " | |
| do. | | " | 1809 | Speedwell, | " | Nicholas Yocum, | |
| do. | | " | 1825 | " | " | Daniel Yocum, | |
| do. | 1842 S | " | 1790 | Rockland, | Rockland Township, | Wm. Herbst, | |
| do. | | " | 1795 | Spring, | Earl " | Bertolet heirs, | Jac |
| do. | | " | 1800 | District, | Pike " | Jacob Deysher, | |
| do. | | " | 1814 | Union, | Albany " | George Reagan, | Wr |
| do. | | " | 1846 | Gibraltar, | Robeson " | H. A. Seyfert, McIlvaine & Co. | |
| do. | | " | 1828 | Maiden Creek, | Hamburg, | George Merkel, | |
| Blair, . . | | " | 1833 | Antes, | Birmingham, | G. McCamant, | |
| do. | | " | 1833 | Cold Spring, | " | John Kratzer, | |
| do. | | " | 1813, 1804 | Tyrone, 2 forges, | " | Lyon, Shorb & Co. | |
| do. | | " | 1828 | Franklin, | Williamsburg, | D. H. Royer, | |
| do. | 1850 F | " | 1805 | Ætna, | Yellow Springs, | Spang, Keller & Co. | |
| do. | | " | 1810 | Cove, | Williamsburg, | Royer & Schmucker, | |
| do. | | Steam. | 1839 | Portage, | Duncansville, | Royer, McNeal & Co. | Roy |
| do. | | Water. | 1816 | Maria, 3 forges, | " | Dr. P. Schoenberger, | |
| do. | | " | 1836 | Alleghany, | " | " | E. |
| do. | 1850 S | " | 1837 | Gap, | E. Freedom, | E. F. Schoenberger, | |
| do. | | " | 1830 | Mary Ann, | Antestown, | John Bell, | |
| Carbon, . . | | " | 1820 | Ashland, | Lehigh Gap, | J. J. Albright, | |
| do. | | " | 1828 | Pennsville, | East Penn, | S. Balliet & Co. | |
| Centre, . . | | " | 1795 | Bellefonte, | Bellefonte, | Valentines & Thomas, | |
| do. | 1850 F | " | 1792 | Rock, | " | Samuel Edmiston, | |
| do. | | " | 1800 | Milesburg, | Milesburg, | Irvin, McCoy & Co. | |
| do. | 1843 F | " | 1811 | Eagle, | " | C. & J. Curtin, | |
| do. | | " | 1840 | Howard, | Howard, | Irvin, Thomas & Co. | |
| Chester, . . | | " | 1847 | Greenwood, | Penningtonville, | M. B. & G. W. Buckley, | |
| do. | | " | 1792 | Hibernia, | Wagontown, | Charles Brooke, | |
| do. | 1848 S | " | 1806 | Pleasant Garden, | N. London ⋈ Roads, | Ellis P. Irwin, | |
| do. | | " | 1785 | Mary Ann, | Downingtown, | Wm. Dowlan, | |
| do. | | " | 1750 | Coventry, | Pottstown, | George Christman, Sr. | Chr |
| do. | | " | 1790 | Springton, | Brandywine Manor, | John B. Christman, | Chr |
| Clinton, . . | | " | 1837 | Washington, | Nittany, | John Henderson, | W. |
| Columbia, . . | 1847 S | " | 1824 | Catawissa, | Maineville, | G. & R. Shuman, | |
| Cumberland, . | 1837 S | " | 1830 | Laurel, | Carlisle, | Wm. M. Watts, | |
| do. | 1847 S | " | 1811 | Carlisle, | " | Peter F. Ege, | |
| do. | | " | 1790 | Liberty, | Lisburn, | H. G. Moser, | |
| Dauphin, . . | | " | 1830 | Oakdale, | Elizabethville, | S. & W. Sawyer, | |
| do. | | " | 1850 | | Dauphin, | Longnecker & Snyder, | |
| Franklin, . . | 1849 S | " | 1846 | Carrick, | Fannettsburg, | N. Kelley, | Wi |
| do. | | " | 1790 | Soundwell, | Roxbury, | Scheffler & Fleming, | |
| do. | | " | 1834 | Northeast, | Louden, | John Beaver, | Lev |
| do. | | " | 1804 | Valley, | " | " | Sch |
| do. | | " | 1832 | Warren, | Sylvan, | Bowers' heirs, | |
| do. | 1842 F | W.&S. | 1805 | Montalto, 2 forges, | Montalto, | H. & H. Hughes, | |
| do. | | Water. | 1830 | Caledonia, | Grafenburg, | Thaddeus Stevens, | |
| Huntingdon, . | | " | 1837 | Juniata, | Alexandria, | S. Hatfield & Son, | |
| do. | 1848 S | " | 1800 | Barre, | " | Joseph Green & Co. | |
| do. | 1840 F | S.&W. | 1832 | Savage, | Paradise, | John Savage, | |
| do. | 1848 S | Water. | 1842 | Malinda, | Orbisonia, | Blair & Madden, | |
| do. | 1850 S | " | 1804 | Juniata, | Shaver's Creek, | E. F. Schoenberger, | |
| do. | 1849 S | " | 1830 | Rebecca, | McElavey Fort P. O. | A. G. Curtin, | |
| do. | | " | 1805, 1809 | Coleraine, 2 forges, | Coleraine Forge, | Lyon, Shorb & Co. | |
| do. | | " | 1826 | Elizabeth, | " P. O. | Martin Gates, | |
| do. | 1848 S | " | 1831 | " | Water Street, | Isett & Harnish, | |
| do. | | " | 1836 | Stockdale, | Spruce Creek, | E. B. Isett, | |
| Lancaster, . . | | " | 1795 | Brooke, | Gap, | George W. Buckley, | |
| do. | | " | 1725 | Windsor, | Churchtown, | David Jenkins, | |
| do. | 1850 F | " | 1750 | Poole, | " | Benjamin Jacobs, | Jam |
| do. | | " | 1793 | Spring Grove, | Goodville, | S. Jacobs' Estate, | J. & |
| do. | | " | 1750 | Speedwell, | Brickerville, | R. W. Coleman, | |
| do. | | Steam. | 1850 | Lancaster, | Lancaster, | George Ford, | |
| do. | | Water. | 1828 | Colemanville, | " | R. & G. D. Coleman, | |
| do. | | " | 1755 | Martic, | " | " | |
| do. | | " | 1830 | White Rock, | Oak Hill, | James Sproul's heirs, | John |
| do. | | " | 1838 | Pine Grove, | " | Enos Pennock, | |
| do. | 1842 S | " | 1810 | Ringwood, | Christiana, | James Sproul's heirs, | Cha |
| do. | | " | 1810 | Sadsbury, | " | " | Geo |
| Lebanon, . . | | " | 1845 | Union, | Jonestown, | J. B. Wideman, | |
| do. | | " | 1795 | New Market, | Anville, | Jacob Light, | Lon |
| do. | | " | 1836 | Monroe, | Fredericksburg, | Jonathan Seidel, | Seid |
| Luzerne, . . | | " | 1824 | Nescopeck, | Berwick, | George Westler, | |
| Lycoming, . . | | " | 1828 | Heshbon, | Newberry, | Wm. McKinney, | |
| do. | | " | 1830 | Hepburn, | Trout Run, | A. D. Hepburn, | John |
| do. | | " | 1831 | Pine Creek, | Jersey Shore, | J. Vickers, | |
| Mifflin, . . | 1847 S | " | 1810 | Freedom, | Lewistown, | John A. Wright & Co. | |
| do. | 1849 S | S.&W. | 1838 | Brookland, | Waynesburg, | H. N. Burroughs, | |
| Montgomery, . | 1847 F | Water. | 1750 | Glasgow, | Pottstown, | Rittenhouse & Schall, | H. |
| do. | | " | 1733 | Green Lane, | Sumneytown, | Wm. Schall, | |
| Northumberland, | | " | 1844 | Paxinas, | Paxinas, | Leisenring & Wolverton, | |
| Perry, . . | 1847 S | " | 1829 | Fio, | Duncannon, | Robert J. Walker, | |
| Philadelphia, . | | " | 1850 | Flat Rock, | Manayunk, | M. B. Buckley & Sons, | |
| Schuylkill, . | | " | 1801 | Schuylkill, | Port Clinton, | John Schall, | Scha |
| . | 1844 S | " | 1838 | Sweeney | " | John Rauch, | |

# EASTERN PENNSYLVANIA in the year 1850.

| | LESSEES. | No. forge fires. | No. Hammers. | Largest Product. Blooms. Tons. | Largest Product. Bars. Tons. | Actual make in 1849. Blooms. Tons. | Actual make in 1849. Bars. Tons. | No. men and boys employed. | No. oxen, horses and mules employed. | Market.* | Run out fires. |
|---|---|---|---|---|---|---|---|---|---|---|---|
| d others, | | 4 | 2 | 175 | 75 | | | 30 | 15 | H. & E. | 1 |
| | | 4 | 2 | 50 | 200 | | | 39 | 12 | " | 1 |
| | | 5 | 2 | 120 | 281 | | | 45 | 20 | H. & W. | |
| | | 1 | 1 | | 61 | | 30 | 8 | 3 | H. | |
| | | 3 | 2 | 100 | 104 | 15 | 95 | 16 | 11 | " | |
| | | 2 | 1 | | 95 | | 95 | 14 | 8 | " | |
| | | 2 | 1 | 230 | | 150 | | 14 | 8 | " | |
| | | 2 | 1 | | 250 | | | 18 | 10 | " | |
| | G. Moyer, | 2 | 1 | 270 | | 270 | | 20 | 12 | " | |
| | | 2 | 1 | | 100 | | 100 | 15 | 5 | " | |
| | | 2 | 1 | | 150 | 150 | | 16 | 6 | E. | |
| | | 3 | 1 | 225 | | 150 | | 20 | 6 | H. | |
| | | 2 | 1 | 200 | | 200 | | 20 | 12 | H. & E. | |
| | | 2 | 2 | | 350 | | 200 | 20 | 12 | " | |
| | | 5 | 2 | 750 | | 750 | | 50 | 20 | E. | 1 |
| | | 2 | 1 | 250 | | 200 | | 30 | 12 | " | |
| | | 2 | 1 | 250 | | 200 | | 30 | 11 | " | |
| | | 2 | 1 | 80 | 50 | 60 | 48 | 20 | 6 | H. & E. | |
| | | 2 | 1 | | 60 | | 56 | 20 | 6 | " | |
| | | 2 | 1 | 150 | | 150 | | 16 | 6 | H. | |
| | Jacob Snell, | 3 | 2 | 221 | | 152 | 50 | 15 | 5 | " | |
| | | 2 | 1 | 150 | | 90 | | 16 | 4 | " | |
| | Wm. & J. Reagan, | 2 | 2 | | 80 | | 25 | 10 | 8 | " | |
| e & Co. | | 4 | 2 | 600 | | 226 | | 26 | 18 | " | |
| | | 2 | 1 | | 100 | | 60 | 16 | 11 | " | |
| | | 3 | 1 | 410 | | 410 | | 30 | 18 | E. & W. | |
| | | 3 | 1 | 434 | | 175 | | 25 | 20 | W. | 1 |
| | | 12 | 3 | 1,543 | | 1,543 | | 60 | 30 | " | |
| | | 4 | 1 | 600 | | 600 | | 30 | 15 | " | 1 |
| | | 4 | 1 | 800 | | 600 | | 30 | 6 | " | 1 |
| | | 3 | 1 | 600 | | 400 | | 30 | 22 | " | 1 |
| | Royer & McNeal, | 3 | 1 | 400 | | 300 | | 10 | 2 | E. & W. | |
| | | 13 | 3 | 1,800 | | 1,800 | | 60 | 50 | W. | 1 |
| | E. H. Lytle, | 4 | 1 | 600 | | 600 | | 75 | 16 | " | 1 |
| | | 5 | 1 | 500 | | 400 | | 35 | 26 | " | 1 |
| | | 4 | 2 | 500 | | 400 | | 20 | 14 | " | 1 |
| | | 2 | 1 | | 100 | | 100 | 12 | 7 | H. | |
| | | 4 | 2 | | 210 | | 50 | 24 | 4 | " | |
| | | 5 | 1 | 600 | | 600 | | 21 | 18 | " | |
| | | 4 | 2 | 400 | | 400 | | 15 | 6 | E. | |
| | | 5 | 1 | 600 | | 400 | | 30 | 24 | H. | 1 |
| | | 7 | 1 | 750 | | 466 | | 21 | 8 | " | 1 |
| | | 2 | 1 | 300 | | | | 10 | 6 | " | |
| , | | 3 | 1 | 350 | | 350 | | 20 | 12 | " | |
| | | 3 | 1 | 400 | | 300 | | 16 | 18 | " | |
| | | 4 | 1 | 600 | | 250 | | 30 | 12 | " | |
| | | 3 | 2 | 386 | | 386 | | 22 | 12 | " | |
| | Christman & Bro. | 3 | 1 | 325 | | 325 | | 18 | 6 | " | |
| | Christman & Irey, | 3 | 2 | 325 | | 325 | | 20 | 10 | " | |
| | W. Morris & Co. | 4 | 3 | 500 | | 450 | | 30 | 6 | E. | |
| | | 3 | 2 | | 100 | | 70 | 25 | 6 | H. | |
| | | 5 | 2 | 500 | 250 | 265 | 127 | 45 | 13 | H. & E. | 1 |
| | | 4 | 2 | | 280 | | 250 | 36 | 4 | H. | |
| | | 5 | 2 | 550 | 30 | 520 | 30 | 25 | 13 | E. | |
| | | 5 | 2 | 340 | 50 | 340 | 50 | 25 | 12 | H. | |
| | | 3 | 1 | | | | | 20 | 8 | " | |
| | Witherow & Walker, | 2 | 1 | 25 | 75 | | 75 | 10 | 5 | " | 1 |
| | | 3 | 2 | | 90 | | 90 | 10 | 6 | " | |
| | Lewis & Bros. | 2 | 1 | | 40 | | 32 | 13 | 4 | " | 1 |
| | Scheffler & Son, | 2 | 1 | | 50 | | 50 | 15 | 6 | " | 1 |
| | | 3 | 1 | 100 | 50 | | | 15 | 4 | H. & E. | 1 |
| | | 7 | 2 | 300 | 200 | 300 | 200 | 150 | 30 | H. | 1 |
| | | 4 | 3 | 28 | 217 | 30 | 200 | 28 | 6 | H. & E. | 1 |
| | | 4 | 1 | 600 | | 600 | | 20 | 8 | H. | 2 |
| | | 6 | 2 | 900 | | 700 | | 40 | 18 | E. & W. | 1 |
| | | 8 | 2 | 500 | | | | 50 | 20 | " | 2 |
| | | 4 | 2 | 250 | 75 | | | 20 | 12 | E. | |
| | | 6 | 1 | 900 | | 475 | | 30 | 14 | W. | 1 |
| | | 3 | 1 | 200 | | | | 27 | 10 | E. | |
| | | 7 | 3 | 1,031 | | 1,031 | | 45 | 30 | W. | |
| | | 2 | 1 | 300 | | 40 | | 20 | 12 | " | |
| | | 3 | 1 | 450 | | 450 | | 20 | 12 | " | 1 |
| | | 2 | 1 | 305 | | 305 | | 10 | 7 | " | |
| | | 3 | 1 | 300 | | 100 | | 30 | 8 | E. | |
| | | 4 | 2 | | 250 | | 125 | 30 | 18 | H. | |
| | Jamison & Sheaff, | 3 | 2 | 300 | | 200 | | 25 | 12 | E. | |
| | J. & R. S. Potts, | 4 | 2 | 556 | | 556 | | 29 | 18 | " | |
| | | 3 | 1 | | 280 | 300 | | 30 | 12 | H. & E. | |
| | | 2 | 1 | | | | | 8 | 2 | " | 1 |
| | | 4 | 2 | 640 | | 564 | | 25 | 12 | " | 1 |
| | | 3 | 1 | 644 | | 497 | | 40 | 20 | " | 1 |
| | John Alexander, | 3 | 2 | | 230 | | 209 | 25 | 12 | " | |
| | | 3 | 2 | 400 | | 346 | | 20 | 18 | " | |
| | Charles Cloud, | 3 | 2 | 305 | | 305 | | 20 | 12 | " | |
| | George Steel, | 4 | 2 | 150 | 200 | 150 | 200 | 30 | 16 | " | |
| | | 4 | 2 | | 150 | | 150 | 35 | 12 | " | |
| | Longnecker & Early, | 5 | 2 | 225 | 125 | 225 | 125 | 45 | 13 | H. | |
| | Seidel & Thompson, | 3 | 1 | 300 | | 300 | | 40 | 12 | H. & E. | |
| | | 4 | 2 | | 200 | | 100 | 25 | 12 | H. | |
| | | 2 | 1 | 300 | | 100 | | 20 | 12 | " | |
| | John Essington, | 3 | 2 | | 140 | | 100 | 15 | 4 | " | |
| | | 4 | 2 | 100 | 200 | | | 32 | 12 | " | |
| | | 6 | 2 | 521 | | 521 | | 50 | 32 | E. | |
| | | 6 | 1 | 950 | | | | 45 | 12 | " | 1 |
| | H. Potts & Co. | 3 | 2 | 400 | | 205 | | 25 | 10 | H. | |
| | | 3 | 2 | 140 | 100 | 80 | 50 | 30 | 9 | H. & E. | |
| | | 2 | 1 | 250 | | 200 | | 20 | 6 | " | |
| | | 5 | 2 | 500 | | | | 50 | 20 | " | |
| | | 3 | 1 | | | | | 25 | 10 | H. | |
| | Schall & Taylor, | 5 | 2 | 283 | | 251 | 32 | 35 | 12 | H. & E. | |
| | | 3 | 2 | 200 | | | | 30 | 10 | | |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| | | " | 1825 | Dowell, | Robeson, | Jonathan Seidel, | |
| do. | 1842 F | " | 1749 | Charming, | Furnace, | H. P. Robeson & Co. | |
| do. | | " | 1830 | Northkill, | Schattlesville, | Joseph Seyfert, | |
| do. | | " | 1840 | Mount Airy, | " | " | |
| do. | | " | 1809 | Speedwell, | " | Nicholas Yocum, | |
| do. | | " | 1825 | " | " | Daniel Yocum, | |
| do. | 1842 S | " | 1790 | Rockland, | Rockland Township, | Wm. Herbst, | |
| do. | | " | 1795 | Spring, | Earl " | Bertolet heirs, | Jacob S |
| do. | | " | 1800 | District, | Pike " | Jacob Deysher, | |
| do. | | " | 1814 | Union, | Albany " | George Reagan, | Wm. & |
| do. | | " | 1846 | Gibraltar, | Robeson " | H. A. Seyfert, McIlvaine & Co. | |
| do. | | " | 1828 | Maiden Creek, | Hamburg, | George Merkel, | |
| Blair, . . | | " | 1833 | Antes, | Birmingham, | G. McCamant, | |
| do. | | " | 1833 | Cold Spring, | " | John Kratzer, | |
| do. | | " | 1813, 1804 | Tyrone, 2 forges, | " | Lyon, Shorb & Co. | |
| do. | | " | 1828 | Franklin, | Williamsburg, | D. H. Royer, | |
| do. | 1850 F | " | 1805 | Ætna, | Yellow Springs, | Spang, Keller & Co. | |
| do. | | " | 1810 | Cove, | Williamsburg, | Royer & Schmucker, | |
| do. | | Steam. | 1839 | Portage, | Duncansville, | Royer, McNeal & Co. | Royer & |
| do. | | Water. | 1816 | Maria, 3 forges, | " | Dr. P. Schoenberger, | |
| do. | | " | 1836 | Alleghany, | " | " | E. H. I |
| do. | 1850 S | " | 1837 | Gap, | E. Freedom, | E. F. Schoenberger, | |
| do. | | " | 1830 | Mary Ann, | Antestown, | John Bell, | |
| Carbon, . . | | " | 1820 | Ashland, | Lehigh Gap, | J. J. Albright, | |
| do. | | " | 1828 | Pennsville, | East Penn, | S. Balliet & Co. | |
| Centre, . . | | " | 1795 | Bellefonte, | Bellefonte, | Valentines & Thomas, | |
| do. | 1850 F | " | 1792 | Rock, | " | Samuel Edmiston, | |
| do. | | " | 1800 | Milesburg, | Milesburg, | Irvin, McCoy & Co. | |
| do. | 1843 F | " | 1811 | Eagle, | " | C. & J. Curtin, | |
| do. | | " | 1840 | Howard, | Howard, | Irvin, Thomas & Co. | |
| Chester, . . | | " | 1847 | Greenwood, | Penningtonville, | M. B. & G. W. Buckley, | |
| do. | | " | 1792 | Hibernia, | Wagontown, | Charles Brooke, | |
| do. | 1848 S | " | 1806 | Pleasant Garden, | N. London ⋈ Roads, | Ellis P. Irwin, | |
| do. | | " | 1785 | Mary Ann, | Downingtown, | Wm. Dowlan, | |
| do. | | " | 1750 | Coventry, | Pottstown, | George Christman, Sr. | Christm |
| do. | | " | 1790 | Springtown, | Brandywine Manor, | John B. Christman, | Christm |
| Clinton, . . | | " | 1837 | Washington, | Nittany, | John Henderson, | W. Mor |
| Columbia, . . | 1847 S | " | 1824 | Catawissa, | Maineville, | G. & R. Shuman, | |
| Cumberland, . | 1837 S | " | 1830 | Laurel, | Carlisle, | Wm. M. Watts, | |
| do. | 1847 S | " | 1811 | Carlisle, | " | Peter F. Ege, | |
| do. | | " | 1790 | Liberty, | Lisburn, | H. G. Moser, | |
| Dauphin, . . | | " | 1830 | Oakdale, | Elizabethville, | S. & W. Sawyer, | |
| do. | | " | 1850 | | Dauphin, | Longnecker & Snyder, | |
| Franklin, . . | 1849 S | " | 1846 | Carrick, | Fannettsburg, | N. Kelley, | Witherо |
| do. | | " | 1790 | Soundwell, | Roxbury, | Scheffler & Fleming, | |
| do. | | " | 1834 | Northeast, | Louden, | John Beaver, | Lewis & |
| do. | | " | 1804 | Valley, | " | " | Scheffler |
| do. | | " | 1832 | Warren, | Sylvan, | Bowers' heirs, | |
| do. | 1842 F | W.&S. | 1805 | Montalto, 2 forges, | Montalto, | H. & H. Hughes, | |
| do. | | Water. | 1830 | Caledonia, | Grafenburg, | Thaddeus Stevens, | |
| Huntingdon, . | | " | 1837 | Juniata, | Alexandria, | S. Hatfield & Son, | |
| do. | 1848 S | " | 1800 | Barre, | " | Joseph Green & Co. | |
| do. | 1840 F | S.&W. | 1832 | Savage, | Paradise, | John Savage, | |
| do. | 1848 S | Water. | 1842 | Malinda, | Orbisonia, | Blair & Madden, | |
| do. | 1850 S | " | 1804 | Juniata, | Shaver's Creek, | E. F. Schoenberger, | |
| do. | 1849 S | " | 1830 | Rebecca, | McElavey Fort P. O. | A. G. Curtin, | |
| do. | | " | 1805, 1809 | Coleraine, 2 forges, | Coleraine Forge, | Lyon, Shorb & Co. | |
| do. | | " | 1826 | Elizabeth, | " P. O. | Martin Gates, | |
| do. | 1848 S | " | 1831 | " | Water Street, | Isett & Harnish, | |
| do. | | " | 1836 | Stockdale, | Spruce Creek, | E. B. Isett, | |
| Lancaster, . . | | " | 1795 | Brooke, | Gap, | George W. Buckley, | |
| do. | | " | 1725 | Windsor, | Churchtown, | David Jenkins, | |
| do. | 1850 F | " | 1750 | Poole, | " | Benjamin Jacobs, | Jamison |
| do. | | " | 1793 | Spring Grove, | Goodville, | S. Jacobs' Estate, | J. & R. |
| do. | | " | 1750 | Speedwell, | Brickerville, | R. W. Coleman, | |
| do. | | Steam. | 1850 | Lancaster, | Lancaster, | George Ford, | |
| do. | | Water. | 1828 | Colemanville, | " | R. & G. D. Coleman, | |
| do. | | " | 1755 | Martic, | " | " | |
| do. | | " | 1830 | White Rock, | Oak Hill, | James Sproul's heirs, | John Ale |
| do. | | " | 1838 | Pine Grove, | " | Enos Pennock, | |
| do. | 1842 S | " | 1810 | Ringwood, | Christiana, | James Sproul's heirs, | Charles |
| do. | | " | 1810 | Sadsbury, | " | " | George S |
| Lebanon, . . | | " | 1845 | Union, | Jonestown, | J. B. Wideman, | |
| do. | | " | 1795 | New Market, | Anville, | Jacob Light, | Longnecl |
| do. | | " | 1836 | Monroe, | Fredericksburg, | Jonathan Seidel, | Seidel & |
| Luzerne, . . | | " | 1824 | Nescopeck, | Berwick, | George Westler, | |
| Lycoming, . . | | " | 1828 | Heshbon, | Newberry, | Wm. McKinney, | |
| do. | | " | 1830 | Hepburn, | Trout Run, | A. D. Hepburn, | John Ess |
| do. | | " | 1831 | Pine Creek, | Jersey Shore, | J. Vickers, | |
| Mifflin, . . | 1847 S | " | 1810 | Freedom, | Lewistown, | John A. Wright & Co. | |
| do. | 1849 S | S.&W. | 1838 | Brookland, | Waynesburg, | H. N. Burroughs, | |
| Montgomery, . | 1847 F | Water. | 1750 | Glasgow, | Pottstown, | Rittenhouse & Schall, | H. Potts |
| do. | | " | 1733 | Green Lane, | Sumneytown, | Wm. Schall, | |
| Northumberland, | | " | 1844 | Paxinas, | Paxinas, | Leisenring & Wolverton, | |
| Perry, . . | 1847 S | " | 1829 | Fio, | Duncannon, | Robert J. Walker, | |
| Philadelphia, . | | " | 1850 | Flat Rock, | Manayunk, | M. B. Buckley & Sons, | |
| Schuylkill, . | | " | 1801 | Schuylkill, | Port Clinton, | John Schall, | Schall & |
| do. | 1844 S | " | 1828 | Susanna, | " | John Raush, | |
| do. | 1841 S | " | 1816 | Brunswick, | " | Koch, Hammer & Huntzinger, | George F |
| do. | 1842 S | " | 1828 | Hecla, | " | Young & Jones, | |
| do. | 1840 S | " | 1830 | Mount Vernon, | " | Ludwig & Ege heirs, | |
| do. | | " | 1826 | Mount Hebron, | Barry, | John B. Otto, | |
| Union, . . | 1848 S | " | 1827 | Berlin, | Hartleytown, | C. & C. Brooke, | |
| York, . . | | " | 1810 | Castlefin, | Castlefin, | R. W. & W. Coleman, | |
| do. | | " | 1770 | Spring, | Spring Forge, | " | |
| do. | 1842 S | " | 1828 | Woodstock, | Margaretta, | Hahn & Himes, | Curran, H |



* In the column headed "Mark[illegible]"

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | 2 | 2 | | 350 | | 200 | 20 | 12 | " | |
| | 5 | 2 | 750 | | 750 | | 50 | 20 | E. | 1 |
| | 2 | 1 | 250 | | 200 | | 30 | 12 | " | |
| | 2 | 1 | 250 | | 200 | | 30 | 11 | " | |
| | 2 | 1 | 80 | 50 | 60 | 48 | 20 | 6 | H. & E. | |
| | 2 | 1 | | 60 | | 56 | 20 | 6 | " | |
| | 2 | 1 | 150 | | 150 | | 16 | 6 | H. | |
| Jacob Snell, | 3 | 2 | 221 | | 152 | 50 | 15 | 5 | " | |
| | 2 | 1 | 150 | | 90 | | 16 | 4 | " | |
| Wm. & J. Reagan, | 2 | 2 | | 80 | | 25 | 10 | 8 | " | |
| Co. | 4 | 2 | 600 | | 226 | | 26 | 18 | " | |
| | 2 | 1 | | 100 | | 60 | 16 | 11 | " | |
| | 3 | 1 | 410 | | 410 | | 30 | 18 | E. & W. | |
| | 3 | 1 | 434 | | 175 | | 25 | 20 | W. | 1 |
| | 12 | 3 | 1,543 | | 1,543 | | 60 | 30 | " | |
| | 4 | 1 | 600 | | 600 | | 30 | 15 | " | 1 |
| | 4 | 1 | 800 | | 600 | | 30 | 6 | " | 1 |
| | 3 | 1 | 600 | | 400 | | 30 | 22 | " | 1 |
| Royer & McNeal, | 3 | 1 | 400 | | 300 | | 10 | 2 | E. & W. | |
| | 13 | 3 | 1,800 | | 1,800 | | 60 | 50 | W. | 1 |
| E. H. Lytle, | 4 | 1 | 600 | | 600 | | 75 | 16 | " | 1 |
| | 5 | 1 | 500 | | 400 | | 35 | 26 | " | 1 |
| | 4 | 2 | 500 | | 400 | | 20 | 14 | " | 1 |
| | 2 | 1 | | 100 | | 100 | 12 | 7 | H. | |
| | 4 | 2 | | 210 | | 50 | 24 | 4 | " | |
| | 5 | 1 | 600 | | 600 | | 21 | 18 | " | |
| | 4 | 2 | 400 | | 400 | | 15 | 6 | E. | |
| | 5 | 1 | 600 | | 400 | | 30 | 24 | H. | 1 |
| | 7 | 1 | 750 | | 466 | | 21 | 8 | " | 1 |
| | 2 | 1 | 300 | | | | 10 | 6 | " | |
| | 3 | 1 | 350 | | 350 | | 20 | 12 | " | |
| | 3 | 1 | 400 | | 300 | | 16 | 18 | " | |
| | 4 | 1 | 600 | | 250 | | 30 | 12 | " | |
| | 3 | 2 | 386 | | 386 | | 22 | 12 | " | |
| Christman & Bro. | 3 | 1 | 325 | | 325 | | 18 | 6 | " | |
| Christman & Irey, | 3 | 2 | 325 | | 325 | | 20 | 10 | " | |
| W. Morris & Co. | 4 | 3 | 500 | | 450 | | 30 | 6 | E. | |
| | 3 | 2 | | 100 | | 70 | 25 | 6 | H. | |
| | 5 | 2 | 500 | 250 | 265 | 127 | 45 | 13 | H. & E. | 1 |
| | 4 | 2 | | 280 | | 250 | 36 | 4 | H. | |
| | 5 | 2 | 550 | 30 | 520 | 30 | 25 | 13 | E. | |
| | 5 | 2 | 340 | 50 | 340 | 50 | 25 | 12 | H. | |
| | 3 | 1 | | | | | 20 | 8 | " | |
| Witherow & Walker, | 2 | 1 | 25 | 75 | | 75 | 10 | 5 | " | 1 |
| | 3 | 2 | | 90 | | 90 | 10 | 6 | " | |
| Lewis & Bros. | 2 | 1 | | 40 | | 32 | 13 | 4 | " | 1 |
| Scheffler & Son, | 2 | 1 | | 50 | | 50 | 15 | 6 | " | 1 |
| | 3 | 1 | 100 | 50 | | | 15 | 4 | H. & E. | 1 |
| | 7 | 2 | 300 | 200 | 300 | 200 | 150 | 30 | H. | 1 |
| | 4 | 3 | 28 | 217 | 30 | 200 | 28 | 6 | H. & E. | 1 |
| | 4 | 1 | 600 | | 600 | | 20 | 8 | H. | 2 |
| | 6 | 2 | 900 | | 700 | | 40 | 18 | E. & W. | 1 |
| | 8 | 2 | 500 | | | | 50 | 20 | " | 2 |
| | 4 | 2 | 250 | 75 | | | 20 | 12 | E. | |
| | 6 | 1 | 900 | | 475 | | 30 | 14 | W. | 1 |
| | 3 | 1 | 200 | | | | 27 | 10 | E. | |
| | 7 | 3 | 1,031 | | 1,031 | | 45 | 30 | W. | |
| | 2 | 1 | 300 | | 40 | | 20 | 12 | " | |
| | 3 | 1 | 450 | | 450 | | 20 | 12 | " | 1 |
| | 2 | 1 | 305 | | 305 | | 10 | 7 | " | |
| | 3 | 1 | 300 | | 100 | | 30 | 8 | E. | |
| | 4 | 2 | | 250 | | 125 | 30 | 18 | H. | |
| Jamison & Sheaff, | 3 | 2 | 300 | | 200 | | 25 | 12 | E. | |
| J. & R. S. Potts, | 4 | 2 | 556 | | 556 | | 29 | 18 | " | |
| | 3 | 1 | | 280 | 300 | | 30 | 12 | H. & E. | |
| | 2 | 1 | | | | | 8 | 2 | " | 1 |
| | 4 | 2 | 640 | | 564 | | 25 | 12 | " | 1 |
| | 3 | 1 | 644 | | 497 | | 40 | 20 | " | 1 |
| John Alexander, | 3 | 2 | | 230 | | 209 | 25 | 12 | " | |
| | 3 | 2 | 400 | | 346 | | 20 | 18 | " | |
| Charles Cloud, | 3 | 2 | 305 | | 305 | | 20 | 12 | " | |
| George Steel, | 4 | 2 | 150 | 200 | 150 | 200 | 30 | 16 | " | |
| | 4 | 2 | | 150 | | 150 | 35 | 12 | " | |
| Longnecker & Early, | 5 | 2 | 225 | 125 | 225 | 125 | 45 | 13 | H. | |
| Seidel & Thompson, | 3 | 1 | 300 | | 300 | | 40 | 12 | H. & E. | |
| | 4 | 2 | | 200 | | 100 | 25 | 12 | H. | |
| | 2 | 1 | 300 | | 100 | | 20 | 12 | " | |
| John Essington, | 3 | 2 | | 140 | | 100 | 15 | 4 | " | |
| | 4 | 2 | 100 | 200 | | | 32 | 12 | " | |
| | 6 | 2 | 521 | | 521 | | 50 | 32 | E. | |
| | 6 | 1 | 950 | | | | 45 | 12 | " | 1 |
| H. Potts & Co. | 3 | 2 | 400 | | 205 | | 25 | 10 | H. | |
| | 3 | 2 | 140 | 100 | 80 | 50 | 30 | 9 | H. & E. | |
| | 2 | 1 | 250 | | 200 | | 20 | 6 | " | |
| | 5 | 2 | 500 | | | | 50 | 20 | " | |
| | 3 | 1 | | | | | 25 | 10 | H. | |
| Schall & Taylor, | 5 | 2 | 283 | | 251 | 32 | 35 | 12 | H. & E. | |
| | 3 | 2 | 200 | | | | 30 | 10 | | |
| George Focht, | 2 | 1 | | 60 | | 30 | 20 | 8 | H. | |
| | 3 | 2 | | 150 | | 102 | 30 | 10 | " | |
| | 2 | 1 | | 100 | | | 20 | 8 | " | |
| | 3 | 2 | | 250 | | 250 | 50 | 25 | " | |
| | 4 | 2 | 300 | | | | 50 | 20 | E. | |
| | 3 | 2 | 150 | 250 | 150 | 200 | 45 | 24 | H. & E. | |
| | 2 | 2 | | 223 | | 190 | 40 | 25 | " | |
| Curran, Himes & Co. | 3 | 2 | | 200 | | | 45 | 24 | " | |
| | 389 | 168 | 32,737 | 6,880 | 24,349 | 3,946 | 3,065 | 1,377 | | 31 |

# A Detailed Statement of all the ROLLING MILLS IN EA

| COUNTY. | Sold by Sheriff, or failed. | Date of construction. | NAME OF WORKS. | SITUATION. POST OFFICE. | OWNERS. | No. Puddling Fur. | No. Heating Fur. | No. Train Rolls. | No. Nail Machines. | CO | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | | Bituminous Coal. Bush. | Anthrac Coal. Tons. |
| Berks,* . . | | 1845 | Bertolet's, | Reading, | M. A. & S. Bertolet & Co. | 4 | 4 | 2 | | | 4,0 |
| do.† | | 1836 | Reading, | " | Reading Iron and Nail Co. | 12 | 3 | 3 | 30 | | 14,0 |
| do. | | 1848 | Birdsboro, | Birdsboro, | E. & G. Brooke, | 4 | 2 | 1 | 16 | | 3,0 |
| do. | | 1846 | Gibraltar, | Robeson Township, | H. A. Seyfert, McIlvaine & Co. | | 2 | 1 | | | 9 |
| do. | | 1845 | Pine, | Douglasville, | Joseph Bailey, | | 2 | 1 | | 25,000 | |
| Blair, . . | | 1839 | Portage, | Duncanville, | Royer, McNeal & Co. | 4 | 4 | 3 | 18 | 115,000 | |
| Centre, . . | | 1825 | Bellefonte, | Bellefonte, | Valentines & Thomas, | 1 | 2 | 3 | | 25,000 | |
| do. | | 1831 | Milesburg, | Milesburg, | Irvin, McCoy & Co. | 1 | 2 | 1 | | 37,500 | |
| do. | 1849 S | 1846 | Hecla, | Zion, | Boyd & Cummings, | 2 | 1 | 1 | | 20,000 | |
| do. | 1843 F | 1829 | Eagle, | Milesburg, | C. & J. Curtin, | 1 | 1 | 1 | | 17,500 | |
| do. | | 1840 | Howard, | Howard, | Irvin, Thomas & Co. | 3 | 1 | 1 | | 30,000 | |
| Chester, . . | | 1838 | Triadelphia, | Coatesville, | James Yearsley & Bro. | 1 | 4 | 2 | | 30,000 | |
| do. | | 1844 | Pine Grove, | Oakhill, | Enos Pennock, | | 2 | 1 | | 12,000 | |
| do. | 1848 S | 1845 | Pleasant Garden, | N. London ⋈ Roads, | Ellis P. Irwin, | 1 | 2 | 1 | | 18,000 | |
| do. | | 1849 | Summerfield, | Pottstown, | Christman & Bro. | | 2 | 1 | | | |
| do. | | 1830 | Chester Co. | Phœnixville, | Jaudons & Mason, | 7 | 2 | 1 | 40 | | 4,0 |
| do. | | 1836 | W. Brandywine, | Coatesville, | S. Hatfield, | | 4 | 2 | | 30,000 | |
| do. | first built 1790 rebuilt 1835 | | Phœnix, | Phœnixville, | Reeves, Buck & Co. | 15 | 4 | 4 | | | 6,9 |
| do. | | 1846 | Phœnix Rail Mill, | " | " | 25 | 6 | 2 | | | 20,6 |
| do. | | 1837 | Hibernia, | Wagontown, | Charles Brooke, | | 2 | 1 | | 14,000 | |
| do. | | 1810 | Brandywine, | Coatesville, | Mrs. R. W. Lukens,‡ | | 2 | 1 | | 21,000 | |
| do. | | 1825 | Laurel, | " | Hugh E. Steel,§ | 1 | 2 | 1 | | 20,000 | |
| do. | | 1847 | Thorndale, | Downingtown, | J. & J. Forsythe & Sons, | 2 | 4 | 1 | | 35,000 | |
| do. | 1849 F | 1795 | Rokeby, | Coatesville, | Mrs. A. Fisler, | | 3 | 1 | | 50,000 | |
| do. | | 1840 | Caln, | " | Pennock's Heirs, | 2 | 3 | 2 | | 50,000 | |
| Columbia, . . | | 1846 | Montour, | Danville, | Montour Iron Co. | 30 | 8 | 2 | | | 19,4 |
| do. | | 1847 | Rough and Ready, | " | Hancock & Foley, | 4 | 2 | 2 | | 2,000 | 3,0 |
| do. | 1848 S | 1845 | Danville, | " | S. P. Case, (Davis, lessee,) | 3 | | 2 | | | 1,0 |
| Cumberland,‖ . | | 1831 | Fairview, | Harrisburg, | J. Pratt & Son, | 5 | 3 | 3 | 36 | 90,000 | |
| Dauphin, . . | 1842 S | 1836 | Harrisburg, | Harrisburg, | J. Pratt & Son, | | 2 | 1 | | 13,000 | 5 |
| Delaware, . . | | 1808 | Franklin, | Chester, | J. G. Johnson, | | 1 | 1 | | | 3 |
| Franklin, . . | 1842 F | 1810 | Montalto, | Montalto, | H. & H. Hughes, | | 4 | 2 | | 5,000 | |
| Huntingdon, . | 1850 S | 1847 | Juniata, | Shaver's Creek, | Ed. F. Schoenberger, | 1 | 3 | 1 | | 15,000 | |
| do. | | 1838 | " | Alexandria, | S. Hatfield & Son, | 2 | 3 | 2 | | 55,000 | |
| Lancaster, . . | | 1848 | Safe Harbor, | Safe Harbor, | Reeves, Abbott & Co. | 24 | 6 | 2 | | 175,000 | 5,9 |
| do. | | 1828 | Colemanville, | Lancaster, | R. & G. D. Coleman, | | 4 | 2 | 12 | | 1,0 |
| Luzerne, . . | 1848 S | 1842 | Wyoming, | Wilkesbarre, | T. T. Paine, | 12 | 10 | 5 | 20 | | 6,5 |
| do. | | 1844 | Lackawanna, | Scrantonia, | Scranton & Platt, | 24 | 7 | 4 | 22 | | 14,0 |
| Lycoming, . . | | 1842 | Heshbon, | Newberry, | Wm. McKinney, | 1 | 1 | 1 | | 17,500 | |
| do. | | 1842 | Crescent, | Trout Run, | C. G. Heilman & Bros. | 2 | 1 | 2 | 7 | 30,000 | |
| Montgomery,¶ . | | 1846 | Pottsgrove, | Pottstown, | Henry Potts & Co. | 3 | 4 | 2 | | | 3,0 |
| do. | | 1846 | Norristown, | Norristown, | Moore & Hooven, | 10 | 3 | 3 | | | 6,1 |
| do. | | 1830 | Conshohocken, | Conshohocken, | Jas. Wood & Sons, | 2 | 2 | 2 | | | 1,2 |
| do. | | 1790 | Cheltenham, | Philadelphia, | Mrs. H. M. Rowland,** | | 3 | 1 | | 25,000 | |
| Northampton, . | | 1837 | Lehigh, | S. Easton, | Rodenbaugh, Stewart & Co. | | 4 | 3 | 6 | | 1,5 |
| Philadelphia, . | | 1845 | Kensington, | Kensington, | Jas. Rowland & Co. | 10 | 3 | 3 | | | 5,0 |
| do. | | 1840 | " | " | Jos. Jobson & Co. | | 2 | 2 | | | 5 |
| do. | | 1845 | Penn, | " | Robbins & Verree, | | 4 | 2 | | | 1,2 |
| do. | | 1846 | Treaty, | " | Leiberts & Wainwright, | 5 | 3 | 2 | | | 3,0 |
| do. | 1848 F | 1846 | Fairmount, | Spring Garden, | Thomas & Ogden, | 7 | 2 | 3 | | | 7,0 |
| do. | | 1848 | Fountain Green, | " | Jas. S. Spencer, | 2 | 2 | 2 | | 7,000 | 3 |
| do. | 1842 S | 1820 | Flat Rock, | Manayunk, | M. B. Buckley & Son, | 1 | 2 | 2 | | 12,000 | 7 |
| do. | | 1842 | Oxford, | Frankford, | W. & H. Rowland, | | 2 | 1 | | 10,000 | 1,0 |
| Perry,†† . . | | 1838 | Duncannon, | Duncannon, | Fisher, Morgan & Co. | 10 | 5 | 5 | 45 | 120,000 | 3,0 |
| Tioga, . . | | Unfinished. | Blossburg, | Blossburg, | J. H. Gulick, | 1 | 1 | 1 | | | |
| Schuylkill,‡‡ . | 1844 S | 1839 | Franklin, | Port Clinton, | John Raush, | 2 | 1 | 1 | | | 1,5 |
| | 12 | | | | | 247 | 164 | 106 | 252 | 1,126,500 | 140,7 |
| | | | | | Schall & Dewees, Norristown, | | | | 24 | | |
| | | | | | Total No. Nail Machines in Eastern Pennsylvania, | | | | 276 | | |

* No bars made last year nor this year. † No bars made for market since June, 1848, now making nails and gas tubes only.
¶ Made no bar iron since January, 1848. ** Rowland & Hunt, lessees. †† Have sold no bars or

# IN EASTERN PENNSYLVANIA, in the year 1850.

| CONSUMED. | | | | Largest Product. | No Furnaces running, 1850. | | No. of men and boys employed | No. oxen, horses and mules employed. | Description of Iron made. | Kind of Power used. | Actual make, 1849. | No. run out fires. | Market. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Anthracite Coal. Tons. | Pig. Tons. | Bloom. Tons. | Scrap Tons. | Tons. | Puddling | Heating. | | | | | Tons. | | |
| 4,000 | 1,800 | 150 | 50 | 1,500 | 2 | 2 | 60 | 2 | Sheets, Bars, Rods, | Steam. | 500 | | E. |
| 14,000 | 5,000 | 200 | 100 | 4,275 | 6 | 3 | 155 | 3 | Bar, Rods, Nails, Band and Hoop, | " | 2,100 | | " |
| 3,000 | 1,200 | 100 | 100 | 1,000 | 4 | 1 | 100 | 4 | Nails, | Water. | 1,000 | | " |
| 900 | | 600 | | 600 | | 1 | 10 | 4 | Boiler, | " | 400 | | " |
| | | 850 | | 850 | | 2 | 18 | 6 | " | " | 850 | | " |
| | 1,700 | 100 | 50 | 1,500 | 4 | 2 | 50 | 18 | Nails, Plate, Bar and Rod, | Steam. | 1,000 | 1 | E. & W. |
| | 500 | 600 | | 1,000 | 1 | 1 | 16 | 18 | Slit Rods, Bars and Axles, | Water. | 1,000 | | E. |
| | 500 | | 20 | 1,000 | 1 | 1 | 30 | 26 | Slit Rods, Bar, Wire-Billets, | " | 800 | | " |
| | 500 | | | 400 | | | 16 | 12 | Plate and Sheet, | Steam. | | | " |
| | 500 | | | 750 | 1 | 1 | 10 | 6 | Wire-Billet and Shovel Plate, | Water. | 546 | | " |
| | 1,250 | | | 1,000 | 3 | 1 | 18 | 3 | Slit Rods and Bars, | " | 400 | | " |
| | 150 | 450 | 20 | 550 | 1 | 2 | 20 | 4 | Boiler and Flue Iron, | " | 550 | | " |
| | | 400 | | 400 | | 1 | 9 | 4 | " " | " | 340 | | " |
| | | 600 | | 600 | | | 16 | 4 | " " | " | | | " |
| | | | | | | | 10 | 10 | " " | S.&W. | | | " |
| 4,000 | 2,200 | 100 | 100 | 2,000 | 7 | 2 | 70 | 2 | Nails, | Water. | 1,800 | | " |
| | | 1,000 | | 1,000 | | 4 | 30 | 14 | Boiler and Flue, | " | 1,000 | | " |
| 6,988 | 5,785 | | | 5,251 | | | 130 | 15 | Bar and Sheet, | S.&W. | | | " |
| 20,656 | 12,105 | | | 9,442 | 13 | 3 | 307 | | R. R. Iron, | Steam. | 5,463 | | " |
| 20 | | 400 | | 450 | | 1 | 16 | | Boiler and Flue, | Water. | | | " |
| 50 | | 944 | | 944 | | 2 | 17 | 4 | " " | " | 944 | | " |
| 50 | | 854 | | 854 | | 2 | 18 | 10 | " " | " | 854 | | " |
| | 200 | 725 | | 725 | 1 | 4 | 32 | | " " | Steam. | 725 | | " |
| 50 | | 875 | | 875 | | | 22 | 10 | " " | Water. | 150 | | " |
| 50 | 800 | 800 | | Angle 600 Boiler 800 | | | 42 | 4 | " and Rod, | " | | | " |
| 19,466 | 9,807 | | | 7,357 | 30 | 8 | 250 | 8 | Rails, | Steam. | 1,943 | | " |
| 3,000 | 1,050 | | 50 | 955 | 4 | 2 | 62 | 2 | Bar, Rod, | " | 955 | | " |
| 1,081 | 803 | | | 725 | | | 28 | 1 | Pud. Bar, | " | | | H. |
| | 1,800 | 50 | | 1,500 | 5 | 3 | 75 | 30 | Bar, Rod, Nails, | Water. | 1,500 | | E. & H. |
| 500 | | 400 | 25 | 400 | | 2 | 14 | 1 | Boiler, | Steam. | 400 | | E. |
| 300 | | 10 | | 220 | | 1 | 7 | 5 | Spring Steel, 210, Sheet Iron, 10, | Water. | 220 | | " |
| | | | 40 | 340 | | 4 | 150 | 30 | Bar and Rods, | " | 340 | 1 | H. |
| | 200 | | | 150 | | | 19 | 1 | Boiler, Sheet, | " | 100 | 1 | W. |
| | 660 | | | 1,000 | 2 | 3 | 45 | 22 | Boiler, Sheet, Bar, | " | 1,000 | 1 | E. H. W. |
| 5,996 | 7,805 | | | 5,567 | 16 | 4 | 375 | 20 | Rails, | Steam. | 5,567 | | E. |
| | | | | | | | | | Boiler and Flue, | | 237 | | " |
| 1,000 | | 1,059 | | 1,500 | | 4 | 50 | 21 | Bar and Slit Rod, | Water. | 871 | | E. & H. |
| | | | | | | | | | Steel, | | 106 | | E. |
| 6,500 | 3,800 | | | 3,000 | | | 250 | 10 | Rails, Bar, Nails, | Steam. | | | " |
| 14,000 | 10,000 | | | 7,000 | 16 | 6 | 250 | 75 | Rails, | S.&W. | 6,000 | | " |
| | 125 | 300 | | 400 | 1 | 1 | 7 | 2 | Bars, | Water. | 350 | | E. & H. |
| | 350 | | 20 | 300 | 1 | 1 | 20 | 6 | Bars and Nails, | " | 300 | | H. |
| 3,000 | 400 | 863 | | 1,500 | 1 | 2 | 30 | 14 | Boiler and Rods, | Steam. | Boiler, 863 | | E. |
| 6,100 | 3,250 | 50 | 150 | 2,775 | 10 | 3 | 125 | 3 | Bars, Band and | " | 1,775 | | " |
| | | | | | | | | | Nail Plates, | | 1,000 | | " |
| 1,200 | 600 | 200 | | 350 | 1 | 1 | 22 | 1 | Imitation Russian Sheet, | Water. | 279 | | " |
| | | 600 | | 600 | | 1 | 25 | 14 | Boiler and Flue, | " | 300 | | " |
| 1,500 | | 1,000 | 50 | Wire 1,050 | | 2 | 65 | | Wire, | " | 900 | | " |
| 5,000 | 2,500 | 250 | 250 | 2,500 | 10 | 3 | 75 | 4 | Bars, Rods, | Steam. | 2,500 | | " |
| 500 | | 1,300 | | 1,200 | | 1 | 8 | 2 | Saw Plates, Spring Steel, | " | 600 | | " |
| 1,250 | | 200 | 1,800 | 2,517 | | 2 | 28 | 4 | Bars, Boiler, Slit Rod, Spring Steel, | " | 1,685 | | " |
| 3,000 | 1,750 | | | 1,400 | | | 75 | 2 | Bars, Rails, | " | | | " |
| 7,000 | 3,416 | 787 | 180 | 3,876 | | | 105 | 4 | Bar, Rod, Band, | " | | | " |
| 300 | 350 | | 50 | 300 | | | 20 | 6 | Rod, Spikes, | " | 300 | | " |
| 750 | 225 | 450 | | 600 | 1 | 1 | 18 | 4 | Boiler and Flue, | Water. | 600 | | " |
| 1,000 | | 400 | 400 | 700 | | 2 | 10 | 4 | Spring and Saw Steel, | Steam. | 600 | | " |
| 3,000 | 4,000 | 50 | 300 | 3,000 | 10 | 3 | 200 | 25 | Bar, Plate, Rod, | Water. | 2,975 | | E. & H. |
| | | | | | | | | | Bars, | Steam. | | | H. |
| 1,500 | 440 | | 150 | 450 | 1 | 1 | 18 | 7 | Bars, | Water. | 50 | | E. & H. |
| 140,707 | 87,521 | 17,717 | 3,905 | 91,598 | 153 | 97 | 3,648 | 511 | | | 54,738 | 4 | |

y. ‡ Gibbons & Huston, lessees. § Steel & Worth, lessees. ‖ Have sold no bars in the city since 1847.
no bars or rods in the city since November, 1848. ‡‡ No bars made for city market since 1847.

STATEMENT, showing the number and condition of each sort of IRON WORKS, in each County in WESTERN PENNSYLVANIA

FURNACES.

| COUNTY. | RAW BITUMINOUS COAL AND HOT BLAST | | | | | COKE AND HOT BLAST. | | | | | CHARCOAL AND HOT BLAST. | | | | | CHAR | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | S.* F. | In. | Out. | Total. | Investment. | S.* F. | In. | Out. | Total. | Investment. | S.* F. | In. | Out. | Total. | Investment. | S.* F. | In. |
| 1. Allegheny, | | | | | | | | | | | | | | | | | |
| 2. Armstrong, | | | | | | 4 | 0 | 4 | 4 | 800,000 | 1 | 1 | | 1 | 38,000 | 5 | 7 |
| 3. Beaver, | | | | | | | | | | | | | | | | 1 | 4 |
| 4. Butler, | | | | | | | | | | | 1 | 1 | 1 | 2 | 77,000 | | 3 |
| 5. Cambria, | | | | | | | | | | | 1 | 1 | | 1 | 40,000 | 6 | 2 |
| 6. Clarion, | | | | | | | | | | | | | | | | | |
| 7. Crawford, | | | | | | | | | | | | | | | | | |
| 8. Elk, | | | | | | | | | | | | | | | | 4 | 3 |
| 9. Erie, | | | | | | | | | | | | | | | | | |
| 10. Fayette, | | | | | | | | | | | | | | | | | |
| 11. Forest, | | | | | | | | | | | 1 | 2 | | 2 | 85,000 | 2 | |
| 12. Greene, | | | | | | | | | | | | 1 | | 1 | 40,000 | | |
| 13. Indiana, | | | | | | | | | | | 3 | 1 | 5 | 6 | 180,000 | 1 | |
| 14. Jefferson, | | | | | | | | | | | 1 | | 1 | 1 | 20,000 | 2 | |
| 15. Lawrence, | | | | | | | | | | | 1 | 1 | 1 | 2 | 40,000 | 11 | 8 |
| 16. McKean, | | | | | | | | | | | | | | | | | |
| 17. Mercer, | 3 | 3 | 4 | 7 | 223,000 | | | | | | 1 | 2 | | 2 | 91,000 | 2 | 2 |
| 18. Somerset, | | | | | | | | | | | | | | | | | |
| 19. Venango, | | | | | | | | | | | | | | | | | |
| 20. Warren, | | | | | | | | | | | | | | | | | |
| 21. Washington, | | | | | | | | | | | | | | | | | |
| 22. Westmoreland, | | | | | | | | | | | | | | | | | |
| | 3 | 3 | 4 | 7 | 223,000 | 4 | 0 | 4 | 4 | 800,000 | 10 | 10 | 8 | 18 | 611,000 | 34 | 49 |

22 Counties—13 Counties having Iron Works.

* Sold by Sheriff or failed since 1840.

WORKS, and the capital invested in the Land and Buildings
YLVANIA, in the year 1850.

| T | CHARCOAL AND COLD BLAST. | | | | | FORGES. | | | ROLLING MILLS. | | | TOTAL. | | | Counties. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| ent. | S.* F. | In. | Out. | Total. | Investment. | S.* F. | Total No. | Investment. | S.* F. | Total No. | Investment. | S.* F. | Total No. | Investment. | |
| | | | | | | | | | | 16 | 1,837,000 | | 16 | 1,837,000 | 1. |
| 000 | 5 | 7 | 4 | 11 | 374,560 | | | | 1 | 2 | 175,000 | 11 | 18 | 1,387,560 | 2. |
| | | | | | | | | | | | | | | | 3. |
| | 1 | 4 | 2 | 6 | 190,000 | | | | | | | 1 | 6 | 190,000 | 4. |
| 000 | | 3 | 1 | 4 | 145,000 | | | | | | | 1 | 6 | 222,000 | 5. |
| 000 | 6 | 22 | 6 | 28 | 1,177,166 | | 1 | 4,000 | | | | 7 | 30 | 1,221,166 | 6. |
| | | | | | | | | | | | | | | | 7. |
| | | | | | | | | | | | | | | | 8. |
| | | | 1 | 1 | 12,000 | | | | | | | | 1 | 12,000 | 9. |
| | 4 | 3 | 2 | 5 | 151,500 | | | | 1 | 2 | 115,000 | 5 | 7 | 266,500 | 10. |
| | | | | | | | | | | | | | | | 11. |
| | | | | | | | | | | | | | | | 12. |
| 000 | 2 | | 2 | 2 | 48,000 | 1 | 1 | 5,000 | | | | 4 | 5 | 138,000 | 13. |
| | | | | | | | | | | | | | | | 14. |
| 000 | | | 1 | 1 | 20,000 | | | | | 2 | 250,000 | | 4 | 310,000 | 15. |
| | | | | | | | | | | | | | | | 16. |
| 000 | 1 | | 3 | 3 | 68,000 | | | | | | | 7 | 16 | 471,000 | 17. |
| 000 | 2 | | 2 | 2 | 35,000 | 1 | 1 | 5,000 | | | | 4 | 4 | 60,000 | 18. |
| 000 | 11 | 8 | 10 | 18 | 487,650 | | | | | 1 | 48,500 | 12 | 21 | 576,150 | 19. |
| | | | | | | | | | | | | | | | 20. |
| | | | | | | | | | | | | | | | 21. |
| 000 | 2 | 2 | 2 | 4 | 105,000 | | | | | | | 3 | 6 | 196,000 | 22. |
| 000 | 34 | 49 | 36 | 85 | 2,813,876 | 2 | 3 | 14,000 | 2 | 23 | 2,425,500 | 55 | 140 | 6,887,376 | |

since 1840.

# A Detailed Statement of all the CHARCOAL HOT-BLAST FUR

| COUNTY. | | Date of Sheriff's sale or failure. | No. furnaces. In. | Out. | Date of construction | NAME OF WORKS. | SITUATION. POST OFFICE. | OWNERS. | Kind of ore used |
|---|---|---|---|---|---|---|---|---|---|
| Armstrong, | 1 | 1844 S | 1 | | 1839 | Buffalo, | Worthington, | P. Graff & Co., | C. |
| Cambria, | 2 | | 1 | | 1846 | Ben's Creek, | Johnstown, | G. S. King & Co., | H. |
| " | | 1848 S | | 1 | 1846 | Eliza, | Ebensburg, | Ritter & Irvin, | H. |
| Clarion, | 1 | 1842 S | 1 | | 1833 | Lucinda, | Lucinda, | Reynolds & Buchanan, | C. |
| Indiana, | 2 | 1845 S | 1 | | 1842 | Indiana, | Armagh, | Elias Baker, | H. |
| " | | | 1 | | 1846 | Blacklick, | " | Schoenberger, King & Co., | " |
| Lawrence, | 1 | | 1 | | 1848 | Wilmington, | Wilmington, | Cassallo Iron Co., | C. |
| Mercer, | 6 | 1848 F | | 1 | 1846 | Hamburg, | Delaware Grove, | John Warden, | " |
| " | | 1848 F | | 1 | 1848 | Harry of the West, | Georgetown, | Dr. Wm. Irvin, | " |
| " | | | 1 | | 1846 | Mineral Ridge, | " | Ward & Co., | " |
| " | | | | 1 | 1846 | Sandy No. 2, | Pryon, | Gen. C. M. Read, | " |
| " | | | | 1 | 1838 | " " 1, | " | " | " |
| " | | 1849 S | | 1 | 1846 | Mazeppa, | Mercer, | J. P. Garrett & Co., | " |
| Somerset, | 1 | 1850 S | | 1 | 1812 | Shade, | Stoystown, | Shryock, Bingham & Co., | C. H. |
| Venango, | 2 | 1847 S | | 1 | 1845 | Orleans, | Franklin, | Reymond & Grey, | C. |
| " | | | 1 | | 1832 | Rockland, | Rockland, | Dempsey & Wick, | " |
| Westmoreland, | 2 | | 1 | | 1847 | Conemaugh, | Armagh, | McGill & Foster, | H. |
| " | | 1848 S | 1 | | 1846 | Laurel Hill, | West Fairfield, | Hoover & McCallister, | " |
| | | 10 | 10 | 8 | | | | | |

Total number furnaces 18

# T FURNACES IN WESTERN PENNSYLVANIA in the year 1850.

| | Kind of ore used. | Largest Product. Tons. | Actual make 1849. Tons. | No. men and boys employed. | No. horses and mules employed | No. tuyeres | Diam. Bosh. feet. | Height feet. | Kind of Power used. | Kind metal and No. | Capacity. Tons. | Remarks. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | C. | 1,800 | 1,800 | 80 | 50 | 2 | 9 | 32 | W.&S. | 3 | 1,800 | |
| | H. | 1,080 | 1,080 | 90 | 35 | 2 | 9 | 30 | Water, | 2, 3 | 1,800 | |
| | H. | 1,000 | | 90 | 45 | 2 | 9 | 30 | " | 3 | 1,800 | |
| , | C. | 1,429 | 1,280 | 80 | 45 | 1 | 7, 10 | 30 | " | 1, 2 | 1,450 | Leased by Reynolds & Evans. |
| | H. | 1,100 | 900 | 80 | 36 | 2 | 9 | 30 | " | 2, 3 | 1,800 | Bosh 7 feet until 1847. |
| Co., | " | 1,000 | 756 | 80 | 46 | 1 | 8 | 30 | " | 2, 3 | 1,400 | |
| | C. | 1,400 | 1,400 | 100 | 50 | 3 | 10 | 34 | Steam, | 2, 3 | 2,000 | |
| | " | 800 | 800 | 75 | 30 | 2 | 10 | 38 | " | 1, 2 | 2,000 | |
| | " | 500 | 500 | 80 | 50 | 3 | 9 | 40 | " | 2, 3 | 1,800 | Leased by Whitaker & Watson. |
| | " | 900 | 400 | 75 | 33 | 2 | 8, 6 | 34 | " | 2, 3 | 1,600 | |
| | " | 600 | | 50 | 30 | 2 | 8 | | Water, | 3 | 1,400 | |
| | " | 500 | | 50 | 30 | 2 | 7 | | " | 3 | 1,000 | |
| | " | 800 | | 60 | 35 | 2 | 7, 6 | 33 | Steam, | 2, 3 | 1,000 | |
| Co., | C. H. | 900 | 750 | 80 | 43 | 1 | 8 | 30 | Water, | 2, 3 | 1,400 | Abandoned 1828, rebuilt 1846. |
| | C. | 700 | 700 | 50 | 45 | 3 | 9 | 27, 6 | " | 2, 3 | 1,800 | |
| | " | 550 | 200 | 50 | 40 | 1 | 8, 6 | 28 | Steam, | 2 | 1,600 | Leased by J. Dempsey. |
| | H. | 800 | 600 | 60 | 30 | 2 | 9 | 33 | " | 3 | 1,800 | |
| , | " | 800 | 800 | 80 | 40 | 2 | 9 | 33 | Water, | 3 | 1,800 | |
| | | 16,659 | 11,966 | 1,310 | 713 | | | | | | 29,230 | |

## A Detailed Statement of all the RAW BITUMINOUS COAL HOT-BLAS

| COUNTY. | Date of Sheriff's sale or failure. | No. Furnaces. In Blast. | No. Furnaces. Out of Blast. | Date of construction. | NAME OF WORKS. | SITUATION. P. O. | OWNERS. | LESS |
|---|---|---|---|---|---|---|---|---|
| Mercer, | | | 1 | 1845 | Middlesex, | Middlesex, | Sennett, Lester & Co., | None. |
| " | | 1 | | 1846 | Sharon, | Sharon, | Schoenburger, Agnew & Co., | " |
| " | | 1 | | 1845 | Clay, | Clarksville, | Himrod, Vincent & Co., | " |
| " | | 1 | | 1845 | Shenango, | Mercer, | McFarland & King, | " |
| " | 1848 F | | 1 | 1846 | Harriet, | Greenville, | Dr. Wm. Irvin, | " |
| " | 1848 F | | 1 | 1846 | Mary Ann, | do. | do. | Whitaker & |
| " | 1848 F | | 1 | 1847 | Blanche, | Sharon, | McClure & Co., | None. |
| | 3 | 3 | 4 | | | | | |

## A Detailed Statement of all the COKE HOT-BLAST FURNACES IN T

| COUNTY. | Sold by Sheriff, or failed. | No. Furnaces. In Blast | No. Furnaces. Out of Blast. | Date of construction. | NAME OF WORKS. | SITUATION. P. O. | OWNERS. | Ore. | B |
|---|---|---|---|---|---|---|---|---|---|
| Armstrong, | 1844 S | | 1 | 1840 | Brady's Bend, | Brady's Bend, | M. P. Sawyer and others, of Boston, | C. | |
| " | 1844 S | | 1 | 1841 | " | " | " | " | |
| " | 1844 S | | 1 | 1843 | " | " | " | " | |
| " | 1844 S | | 1 | 1846 | " | " | " | " | |
| | 4 | | 4 | | | | | | |

## T-BLAST FURNACES IN PENNSYLVANIA, in the year 1850.

| | LESSEES. | Kind fore used. | Largest Product. Tons. | Actual make 1849, Tons. | No. Men and boys employed. | No. oxen, Horses, and mules employed. | BLAST. Tuyeres. No. | Diam. | Pressure | STACK. Bosh. feet. | Height. feet. | Kind of Power used. | Kind of metal made and No. | Capacity. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | None. | C. | 1,400 | 1,000 | 80 | 30 | 2 | 3 | | 10 | 37 | Steam. | 1, 2 | 2,000 |
| , | " | C. | 1,750 | 1,750 | 80 | 20 | 3 | 3 | | 10 | 40 | Steam. | 2, 3 | 2,000 |
| | " | C. | 1,150 | 1,150 | 75 | 30 | 2 | 3 | 2 | 8½ | 37 | " | 2, 3 | 1,600 |
| | " | C. | 1,000 | 1,000 | 60 | 25 | 2 | 3 | 2 | 8 | 36 | W. & S. | 2, 3 | 1,500 |
| | " | C. | 800 | | 80 | 40 | 2 | 3 | | 10 | 55 | Steam. | 3 | 2,000 |
| | Whitaker & Watson. | C. | 1,200 | | 80 | 50 | 3 | 3 | | 10 | 50 | " | 3 | 2,000 |
| | None. | C. | 500 | | 60 | 25 | 3 | 3 | | 8 | 40 | " | 3 | 1,500 |
| | | | 7,800 | 4,900 | 515 | 220 | | | | | | | | |

## ES IN THE STATE OF PENNSYLVANIA in the year 1850.

| | Ore. | Bushels Coal consumed. | Largest Product. Tons. | Actual make 1849. Tons. | No. Men and boys employed. | No. oxen, Horses, mules employed. | BLAST. Tuyeres. No. | Diam. | STACK. Bosh. feet. | Height. feet. | Kind of Power used and No. | Kind of metal made and No. | Capacity. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| on, | C. | | | | | | 3 | 2½a3 | 11 | 40 | Steam. | 2, 3 | 2,000 |
| | " | 1,120,000 | 10,000 | 0 | 900 | 100 | 3 | " | 11 | 40 | " | " | 2,000 |
| | " | | | | | | 3 | " | 13 | 50 | " | " | 3,500 |
| | " | | | | | | | " | 14 | 50 | " | " | 4,500 |
| | | | | | | | | | | | | | 12,000 |

# A Detailed Statement of all the CHARCOAL COLD BLAST FURNAC

| COUNTY. | | Date of Sheriff's sale or failure. | No. Furnaces. In Blast. | No. Furnaces. Out Blast. | Date of construction. | NAME OF WORKS. | SITUATION. POST OFFICE. | OWNERS. |
|---|---|---|---|---|---|---|---|---|
| Armstrong, | 11 | 1849 S | | 1 | 1847 | Rock, | Apollo, | A. Woodward, |
| " | | | | 1 | 1846 | Buffalo, | Worthington, | P. Graff & Co. |
| " | | | 1 | | 1842 | Red Bank, | Red Bank, | Reynolds & Richie, |
| " | | 1850 F | | 1 | 1847 | Olney, | Kittanning, | McCrea & Galbraith, |
| " | | | 1 | | 1845 | Mahoning, | " | J. A. Caldwell & Co. |
| " | | | | 1 | 1830 | Alleghany, | " | A. McNickle, |
| " | | | 1 | | 1846 | American, | " | Jamison & Ledlie, |
| " | | 1845 F | 1 | | 1845 | Ore Hill, | " | W. & R. McCutcheon & C |
| " | | 1849 F | 1 | | 1845 | Cowanshannock, | " | James E. Brown, |
| " | | 1849 S | 1 | | 1846 | Phœnix, | Glade Run, | G. B. McFarland, |
| " | | | 1 | | 1846 | Pine Creek, | Kittanning, | Browns & Mosgrove, |
| Butler, | 6 | | | 1 | 1848 | Marion, | Harrisville, | James Kerr, |
| " | | 1843 S | | 1 | 1828 | Slippery Rock, | Slippery Rock, | J. McJunkin, |
| " | | | 1 | | 1840 | Hickory, | " | Stewart & Sullivan, |
| " | | | 1 | | 1843 | Maple, | Maple Furnace, | H. Graff. |
| " | | | 1 | | 1847 | Kensington, | Lawrenceburg, | A. W. Crawford & Co. |
| " | | | 1 | | 1848 | Winfield, | Butler, | W. L. Spear, |
| Cambria, | 4 | | 1 | | 1845 | Mill Creek, | Johnstown, | J. Bell & Co. |
| " | | | 1 | | 1842 | Cambria, | " | King & Schoenberger, |
| " | | | 1 | | 1846 | Mount Vernon, | " | Linton, Galbraith & Co. |
| " | | | | 1 | 1847 | Ashland, | Summit, | Hugh McNeil, |
| Clarion, | 28 | | 1 | | 1845 | Helen, | Clarion, | W. S. Packer & Co. |
| " | | | | 1 | 1828 | Clarion, | " | C. Meyers, |
| " | | | | 1 | 1845 | Martha, | " | " |
| " | | | 1 | | 1844 | Mary Ann, | Shippenville, | J. Black & Co. |
| " | | | 1 | | 1832 | Shippenville, | " | Shippen & Black, |
| " | | | 1 | | 1844 | Tippecanoe, | " | King & Maxwell, |
| " | | . | 1 | | 1844 | Prospect, | Callansburg, | Alexander & McIlroy, |
| " | | | 1 | | 1842 | Elk, | Shippenville, | W. B. Fetzer, |
| " | | | 1 | | 1844 | St. Charles, | Leatherwood, | Patrick Kerr, |
| " | | 1850 S | | 1 | 1844 | Deer Creek, | Shippenville, | James Hasson, |
| " | | 1849 S | | 1 | 1844 | Black Fox, | Brady's Bend, | Adams & Vernon, |
| " | | | 1 | | 1841 | Clinton, | Clinton Furnace, | Moore & Seymour, |
| " | | | 1 | | 1845 | Licking, | Licking, | Sigworth & Fetzer, |
| " | | | 1 | | 1845 | Monroe, | Clarion, | C. Fulton, |
| " | | 1850 S | | 1 | 1845 | Limestone, | Greenville, | J. & J. B. Lyons, |
| " | | | 1 | | 1838 | Jefferson, | Jefferson Furnace, | S. F. Plummer, |
| " | | | 1 | | 1842 | Buchanan, | Callansburg, | Plummer & Creary, |
| " | | | 1 | | 1845 | Pike, | Curlsville, | Lawson, Duff & Orr, |
| " | | | 1 | | 1846 | Eagle, | Callansburg, | Reynolds & Cribbs, |
| " | | 1849 S | 1 | | 1846 | Catfish, | Brady's Bend, | Miller & Son, |
| " | | | 1 | | 1845 | Sligo, | Clarion, | Lyon, Shorb & Co. |
| " | | | 1 | | 1836 | Madison, | " | " |
| " | | | 1 | | 1835 | Beaver, | Shippenville, | Miller & Long, |
| " | | | 1 | | 1846 | Washington, | Clarion, | Long, Carothers & Co. |
| " | | 1849 F | 1 | | 1847 | Mount Pleasant, | Strattonville, | Brown, Phillips & Co. |
| " | | | 1 | | 1845 | Hemlock, | Clinton, | Horner & Eaton, |
| " | | 1849 S | | 1 | 1843 | Franklin, | Reimersburg, | J. Thompson & Co. |
| " | | | 1 | | 1846 | Richland, | Emlington, | John Keating, |
| Erie, | 1 | | | 1 | 1842 | Erie, | Erie, | Vincent, Himrod & Co. |
| Fayette, | 5 | | 1 | | 1796 | Fair Chance, | Uniontown, | F. H. Oliphant & Son, |
| " | | 1847 F | 1 | | 1820 | Cool Spring,* | " | McKean and others, |
| " | | 1848 F | | 1 | 1835 | Wharton, | " | A. Stewart, |
| " | | 1849 F | | 1 | 1805 | Spring Hill, | Spring Hill, | J. K. Duncan, |
| " | | 1849 F | 1 | | 1796 | Union, | Connelsville, | S. Shoyer, |
| Indiana, | 2 | 1849 S | | 1 | 1847 | Buena Vista, | Armagh, | McClelland & Co. |
| " | | 1848 S | | | 1847 | Loop, | Smixburg, | Hampton & Smith, |
| Lawrence, | 1 | | | 1 | 1844 | Martha, | New Castle, | Power & Sons, |
| Mercer, | 3 | | | 1 | 1837 | Springfield, | Leesburg, | P. Sennett & Co. |
| " | | 1850 S | | 1 | 1845 | Oregon, | Mercer, | Lyon, Mix & Co. |
| " | | | | 1 | 1846 | Iron City, | " | W. W. Wallace, |
| Somerset, | 2 | 1849 S | | 1 | 1847 | Somerset, | Johnstown, | Huber & Myers, |
| " | | 1847 F | | 1 | 1844 | Rock, | Stoystown, | Kuster & Little, |
| Venango, | 18 | 1849 F | | 1 | 1843 | Bullion Run, | Franklin, | McKee & Harris, |
| " | | 1850 S | | 1 | 1830 | Venango, | Phipps' Mills, | A. Phipps, |
| " | | 1846 S | | 1 | 1843 | Annandale, | Hendersonville, | Gen. C. Read, |
| " | | | 1 | | 1847 | President, | President Furnace, | E. E. Clapp & Co. |
| " | | | 1 | | 1835 | Mill Creek, | Mill Creek, | Charles Shippen, |
| " | | | 1 | | 1832 | Van Buren, | Franklin, | James Eaton, |
| " | | | 1 | | 1832 | Clay, | " | Edmund Evans, |
| " | | 1850 S | 1 | | 1834 | Slab, | " | James Hughes, |
| " | | 1850 S | | 1 | 1844 | Victoria, | " | Alexander Hays, |
| " | | 1848 S | | 1 | 1844 | North Bend, | " | Hoover & Rens, |
| " | | 1850 S | | 1 | 1844 | Union, | " | Guest, Williams & Co. |
| " | | 1848 S | | 1 | 1844 | Texas, | " | A. W. Porter, |
| " | | 1847 S | | 1 | 1842 | Liberty, | Sugar Creek, | E. Reynolds & Co. |
| " | | | | 1 | 1843 | Reymilton, | Franklin, | A. W. Raymond, |
| " | | | 1 | | 1839 | Webster,† | Rockland, | Dempsey & Wick, |
| " | | 1848 S | 1 | | 1836 | Sandy, | Franklin, | Painter & Co. |
| " | | | 1 | | 1838 | Jane, | Clintonville, | W. Cross & Co. |
| " | | 1850 S | | 1 | 1835 | Jackson, | Cass, | N. B. & D. P. Hatch, |
| Westmoreland, | 4 | | 1 | | 1815 | Ross, | West Fairfield, | J. D. Mathiott & Co. |
| " | | | 1 | | 1809 | Washington,‡ | Laughlintown, | J. Bell, |
| " | | 1849 S | | 1 | 1847 | Ramsey, | Kiskiminitis, | Dr. Spear, |
| " | | 1848 S | | 1 | 1846 | Lockport, | Lockport, | W. McKierney, |
| No. furnaces sold by Sheriff or failed, . . | | 34 | | | | | | |
| No furnaces in blast, . | | | 49 | | | | | |
| No. furnaces out blast, . | | | . | 35 | | | | |
| Total No. Furnaces, . | | | . | . | 84 | | | |

* Leased by F. H. Oliphant and Son.

† Leased by S. Dempse

# URNACES in WESTERN PENNSYLVANIA in the year 1850.

| NERS. | Kind of ore used. | Largest Product. | Actual Product 1849. | No. of men and boys employed. | No. horses and mules employed. | No. Tuyeres. | STACK. | | Kind of Power used. | Kind of Metal made. | Capacity. |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Tons. | Tons. | | | | Bosh. feet. | Height. feet. | | No. | Tons. |
| , | H. C. | 600 | | 60 | 48 | 1 | 8 | 30 | Steam. | 3 | 1,100 |
| ). | C. | 300 | 300 | 40 | 20 | 2 | 8 | 32 | S.&W. | 3 | 1,100 |
| Richie, | " | 1,900 | 1,900 | 100 | 70 | 2 | 9 | 32 | Steam. | 3 | 1,900 |
| lbraith, | " | 800 | 800 | 60 | 48 | 1 | 8 | 30 | Water. | 3 | 1,100 |
| l & Co. | " | 1,300 | 1,300 | 83 | 52 | 2 | 9 | | " | 3 | 1,400 |
| | " | 600 | | 45 | 23 | 1 | 8 | | Steam. | 3 | 1,100 |
| dlie, | " | 700 | 700 | 57 | 38 | 2 | 8,6 | | " | 3 | 1,350 |
| Cutcheon & Co. | " | 1,610 | 1,610 | 108 | 80 | 2 | 8 | | " | 3 | 1,610 |
| wn, | " | 600 | 400 | 36 | 34 | 1 | 8 | | Water. | 3 | 1,100 |
| and, | " | 1,040 | 1,040 | 75 | 50 | 1 | 8 | 30 | " | 3 | 1,100 |
| sgrove, | " | 1,436 | 1,436 | 65 | 50 | 2 | 8,4 | 32, 6 | Steam. | 3 | 1,430 |
| | " | 700 | 700 | 40 | 28 | 1 | 8 | | Water. | 2, 3 | 1,100 |
| | " | 850 | | 47 | 29 | 1 | 8 | | " | 3 | 1,100 |
| livan, | " | 850 | 650 | 50 | 26 | 1 | 8 | | " | 3 | 1,100 |
| | H. C. | 1,000 | 1,000 | 80 | 60 | 1 | 9 | 31 | Steam. | 2, 3 | 1,400 |
| rd & Co. | C. | 900 | 600 | 80 | 50 | 2 | 9 | | " | 3 | 1,400 |
| | " | 1,400 | 1,400 | 100 | 70 | 2 | 9 | | " | 3 | 1,400 |
| | H. | 1,650 | 840 | 80 | 38 | 1 | 8 | 30 | Water. | 3 | 1,100 |
| nberger, | " | 1,300 | 820 | 90 | 45 | 2 | 8 | 30 | Steam. | 3 | 1,300 |
| ith & Co. | " | 1,000 | 1,000 | 90 | 45 | 1 | 8 | 30 | " | 3 | 1,100 |
| , | C. | 800 | 800 | 80 | 40 | 1 | 8 | 30 | Water. | 3 | 1,100 |
| & Co. | " | 1,500 | 1,000 | 100 | 70 | 2 | 9 | 32 | Steam. | 3 | 1,500 |
| | " | 1,400 | 600 | 70 | 45 | 1 | 9 | 32 | Water. | 3 | 1,400 |
| | " | 1,100 | 600 | 70 | 45 | 2 | 9 | 32 | Steam. | 3 | 1,400 |
| . | " | 700 | 450 | 50 | 30 | 1 | 8 | 30 | Water. | 3 | 1,100 |
| ck, | " | 1,200 | 1,200 | 70 | 50 | 1 | 8,6 | 32 | " | 2, 3 | 1,350 |
| ell, | " | 1,000 | 800 | 65 | 46 | 1 | 8 | 32 | S.&W. | 3 | 1,100 |
| McIlroy, | " | 700 | 700 | 60 | 41 | 1 | 7,6 | | " | 3 | 1,000 |
| | " | 800 | 500 | 60 | 34 | 1 | 7,6 | | Water. | 3 | 1,000 |
| | " | 1,000 | 800 | 81 | 48 | 2 | 9 | | S.&W. | 2, 3 | 1,400 |
| | " | 900 | 100 | 66 | 36 | 1 | 8 | | Water. | 3 | 1,100 |
| on, | " | 950 | 950 | 66 | 40 | 1 | 8,6 | | Steam. | 3 | 1,350 |
| our, | " | 650 | 500 | 56 | 36 | 1 | 8 | | Water | 3 | 1,100 |
| tzer, | " | 550 | 400 | 52 | 35 | 1 | 7,6 | | " | 3 | 1,000 |
| | " | 900 | 700 | 72 | 38 | 1 | 8 | | " | 2, 3 | 1,100 |
| ns, | " | 700 | 316 | 58 | 33 | 1 | 8 | | " | 3 | 1,100 |
| , | " | 1,200 | 1,200 | 83 | 58 | 2 | 9 | | W.&S. | 3 | 1,400 |
| reary, | " | 1,200 | 830 | 86 | 61 | 2 | 9 | | Steam. | 3 | 1,400 |
| & Orr, | " | 1,000 | 830 | 77 | 53 | 1 | 8,6 | | " | 3 | 1,350 |
| ibbs, | " | 850 | 850 | 58 | 47 | 1 | 8 | | " | 3 | 1,100 |
| | " | 1,120 | 1,120 | 75 | 48 | 1 | 9 | | " | 3 | 1,400 |
| Co. | C. H. | 1,555 | 1,215 | 75 | 40 | 1 | 8,6 | 35 | " | 3 | 1,560 |
| | " | 1,565 | 1,421 | 75 | 40 | 1 | 8,6 | 35 | S.&W. | 3 | 1,560 |
| , | C. | 1,210 | 1,050 | 92 | 73 | 1 | 9 | | Steam. | 3 | 1,400 |
| s & Co. | " | 1,420 | 1,420 | 105 | 84 | 2 | 9 | | " | 3 | 1,420 |
| s & Co. | " | 830 | 830 | 62 | 45 | 1 | 8,6 | | " | 3 | 1,350 |
| n, | " | 986 | 986 | 69 | 43 | 1 | 8,6 | | S.&W. | 3 | 1,350 |
| Co. | " | 1,025 | 912 | 67 | 50 | 1 | 8 | | Steam. | 3 | 1,100 |
| | " | 1,060 | 1,060 | 70 | 56 | 1 | 9 | | " | 3 | 1,400 |
| d & Co. | B. | 900 | 300 | 50 | 50 | 1 | 7 | 30 | Water. | 1, 2 | 900 |
| & Son, | C. | 800 | 600 | 48 | 25 | 1 | 9 | 36 | S.&W. | 2, 3 | 1,400 |
| hers, | " | 300 | 200 | 30 | 15 | 1 | 7 | 33 | Water. | 3 | 900 |
| | " | 1,000 | | 60 | 42 | 1 | 8 | 33 | S.&W. | 2, 3 | 1,100 |
| | " | 600 | 400 | 50 | 28 | 1 | 8 | 33 | " | 2, 3 | 1,100 |
| | " | 600 | 320 | 55 | 28 | 1 | 8 | 33 | Water. | 2, 3 | 1,100 |
| Co. | " | 400 | | 61 | 30 | 1 | 8 | 30 | " | 3 | 1,100 |
| ith, | " | 200 | | 50 | 25 | 2 | 9 | 33 | " | 3 | 1,400 |
| | " | 600 | 200 | 75 | 30 | 2 | 8 | 36 | " | 2, 3 | 1,100 |
| o. | " | 500 | 300 | 41 | 20 | 2 | 7 | 32 | " | 1, 2 | 900 |
| o. | " | 300 | | 50 | 25 | 2 | 8,6 | 37 | Steam. | 3 | 1,350 |
| e, | " | 600 | 600 | 75 | 40 | 2 | 8,6 | 34 | " | 2, 3 | 1,350 |
| s, | C. H. | 900 | 300 | 80 | 50 | 1 | 8,6 | 30 | Water. | 3 | 1,350 |
| , | C. | 300 | | 43 | 15 | 1 | 6 | 21 | " | 2 | 700 |
| is, | " | 760 | | 58 | 38 | 1 | 8 | | " | 3 | 1,100 |
| | " | 1,200 | 250 | 70 | 50 | 1 | 8 | | " | 3 | 1,200 |
| | " | 800 | 200 | 53 | 46 | 1 | 8 | | Steam. | 3 | 1,100 |
| Co. | " | 509 | 509 | 50 | 25 | 1 | 8 | | Water. | 2, 3 | 1,100 |
| n, | " | 910 | 550 | 62 | 46 | 1 | 7,6 | | " | 3 | 1,000 |
| | C. B. | 920 | 700 | 57 | 50 | 1 | 7,6 | | " | 3 | 1,000 |
| , | C. | 800 | 500 | 50 | 35 | 1 | 8 | | " | 3 | 1,100 |
| | " | 700 | 400 | 50 | 30 | 1 | 8,6 | 30 | " | 3 | 1,350 |
| s, | " | 700 | 200 | 46 | 33 | 1 | 8,6 | | " | 3 | 1,350 |
| , | " | 450 | | 30 | 25 | 1 | 8,6 | | " | 3 | 1,350 |
| s & Co. | " | 600 | 150 | 42 | 31 | 1 | 8 | | " | 3 | 1,100 |
| | " | 500 | | 36 | 30 | 1 | 8,6 | | " | 3 | 1,350 |
| Co. | " | 500 | 200 | 60 | 50 | 1 | 8 | 30 | Steam. | 3 | 1,100 |
| d, | " | 1,000 | 450 | 60 | 60 | 1 | 8 | 30 | Water. | 3 | 1,100 |
| ick, | " | 800 | 500 | 65 | 58 | 1 | 8,6 | 30 | W.&S. | 3 | 1,350 |
| | " | 653 | 653 | 53 | 32 | 1 | 8 | | Water. | 3 | 1,100 |
| ). | " | 785 | 480 | 57 | 38 | 1 | 8 | | " | 3 | 1,100 |
| Hatch, | " | 730 | 310 | 60 | 36 | 1 | 8,6 | | " | 3 | 1,350 |
| & Co. | F. | 750 | 500 | 30 | 40 | 1 | 8 | 30 | " | 1, 2 | 1,100 |
| | " | 560 | 560 | 40 | 30 | 1 | 9 | 33 | " | 2, 3 | 1,400 |
| | H. | 90 | | 50 | 20 | 1 | 9 | 34 | " | 3 | 1,400 |
| , | " | 400 | | 50 | 25 | 1 | 8 | 33 | " | 3 | 1,100 |
| | | 72,924 | 50,968 | 5,353 | 3,520 | | | | | | 104,130 |

S. Dempsey.

‡ Abandoned 1826, Rebuilt 1848.

# A Detailed Statement of all the CHARCOAL FORGES IN WEST

| COUNTY. | Date of Sheriff's sale or failure. | Kind of power employed. | Date of construction. | NAME OF WORKS. | SITUATION. P. O. | OWNERS. |
|---|---|---|---|---|---|---|
| Clarion, | | Water, | 1833 | Shippenville, | Shippenville, | Shippen & Black, |
| Indiana, | 1845 S | " | 1841 | Indiana, | Armagh, | Elias Baker, |
| Somerset, | 1850 S | " | 1826 | Shade, | Stoystown, | Shryock, Bingham & Co., |
| | 2 | | 3 | | | |

## WESTERN PENNSYLVANIA in the year 1850.

| ERS. | No. forge fires | No. hammers. | Largest Product. | Actual make 1849. | | Men and boys employed. | Horses, mules and oxen employed. | Market. | No. run out. Fires. |
|---|---|---|---|---|---|---|---|---|---|
| | | | Tons. | Bars. | Blooms. | | | | |
| ack, | 2 | 1 | 150 | 50 | | 16 | 4 | Home, | 1 |
| | 2 | 1 | 200 | 20 | 100 | 18 | 6 | " | 1 |
| gham & Co., | 1 | 1 | 30 | 30 | | 8 | 3 | " | |
| | 5 | 3 | 380 | 100 | 100 | 42 | 13 | | 2 |

# A Detailed Statement of all the ROLLING MILLS IN

| COUNTY. | Date of Sheriff's sale or failure. | Date of construction. | NAME OF WORKS. | SITUATION. POST OFFICE. | OWNERS | Number puddling Fur. | Number Heating Fur. | No. Trains. Rolls. | No. Nail Machines. | CONSUMED | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | | Bituminous Coal. Bush. | Wood Cords. | Pig. Tons. |
| Alleghany, | | 1836 | Pittsburg, | Pittsburg, | Lorentz, Sterling & Co., | 14 | 6 | 5 | 25 | 480,000 | 500 | 6,000 |
| " | | 1824 | Kensington, | " | Carothers, Miller & Co., | 11 | 5 | 5 | 14 | 360,000 | | 5,000 |
| " | | 1835 | Wayne, | " | Bailey, Brown & Co., | 11 | 6 | 4 | 16 | 300,000 | | 4,500 |
| " | | 1845 | Lippincott, | " | Graff, Lindsay & Co., | 9 | 7 | 4 | 14 | 300,000 | | 4,700 |
| " | | 1825 | Sligo, | " | Lyon, Shorb & Co., | 6 | 9 | 4 | 13 | 320,000 | | 2,650 |
| " | | 1823 | Juniata, | " | G. & J. H. Schoenberger, | 14 | 12 | 5 | 50 | 410,000 | | 5,000 |
| " | | 1828 | Ætna, | " | Spang & Co., | 11 | 8 | 4 | 25 | 300,000 | | 4,500 |
| " | | 1840 | Hecla, | " | Wood & McKnight, | 11 | 5 | 3 | 15 | 300,000 | | 5,000 |
| " | | 1849 | Eagle, | " | Jas. Wood & Co., | 10 | 5 | 4 | 31 | 200,000 | | 2,800 |
| " | | 1846 | Clinton, | " | Cuddy, Jones & Co., | 10 | 6 | 4 | 11 | 177,300 | | 2,560 |
| " | | 1828 | Juniata, | Alleghany City, | Semple, Bissell & Co., | 9 | 4 | 4 | 13 | 300,000 | | 4,000 |
| " | | 1845 | Vesuvius, | Pittsburg, | Lewis, Dalzell & Co., | 9 | 6 | 4 | 19 | 260,000 | | 3,000 |
| " | | 1849 | Pennsylvania, | " | Everson, Preston & Co., | 2 | 3 | 2 | | 75,000 | 400 | 50 |
| " | | 1849 | Sheffield, | " | Singer, Hartman & Co., | 2 | 6 | 2 | | 150,000 | | 600 |
| " | | 1844 | Duquesne, | " | Coleman, Hailman & Co,, | | 4 | 4 | | 120,000 | | |
| " | | 1845 | Pittsburg Steel, | " | Jones & Quigg, | | 3 | 1 | | 100,000 | | |
| Armstrong, | 1844 S | 1841 | Brady's Bend, | Brady's Bend, | M. P. Sawyer and others, | 26 | 10 | 2 | | 672,000 | | 9,000 |
| " | | 1848 | Kittanning, | Kittanning, | Brown, Phillips & Co., | 10 | 5 | 4 | 12 | 360,000 | | 3,300 |
| Fayette, | | 1834 | Fairchance, | Uniontown, | F. H. Oliphant & Son, | 2 | 3 | 3 | 6 | 100,000 | | 900 |
| " | 1847 S | 1842 | Brownsville, | Brownsville, | E. Hughes, lessee, | 4 | 4 | 3 | 10 | 150,000 | | 2,000 |
| Lawrence, | | 1842 | Cossallo, | New Castle, | Cossallo Iron Co., | 8 | 4 | 3 | 25 | 150,000 | | 3,000 |
| " | | 1847 | Orizaba, | " | Peebles & Co., | 4 | 4 | 3 | 21 | 160,000 | | 3,200 |
| Venango, | | 1844 | Franklin, | Franklin, | H. Coulter & Co., | 4 | 2 | 3 | 10 | 120,000 | | 1,500 |
| | 2 | | | | | 187 | 128 | 80 | 330 | 5,864,300 | 900 | 73,200 |

Total No. Mills, 23

# LLS IN WESTERN PENNSYLVANIA in the year 1850.

| CONSUMED. | | | | Largest Product. | No. Furnaces running, 1850. | | Men and boys employed. | Horses, mules and oxen employed. | No. and kind of power employed. | Actual make 1849. Tons. | No. run out Fires. | No. Forge fires. | Description of Iron made. | Remarks. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Wood Cords. | Pig. Tons. | Bloom. Tons. | Scrap Tons. | Tons. | Puddling | Heating. | | | | | | | | |
| 500 | 6,000 | 500 | 500 | 5,500 | 14 | 6 | 250 | 10 | Steam. | 5,500 | 1 | 1 | | |
| | 5,000 | 500 | 200 | 4,500 | 11 | 5 | 160 | 10 | " | 4,500 | 1 | | | |
| | 4,500 | 300 | 100 | 4,000 | 11 | 6 | 150 | 10 | " | 2,500 | 1 | | | |
| | 4,700 | 250 | 150 | 4,000 | 9 | 7 | 150 | 4 | " | 4,000 | 1 | | | |
| | 2,650 | 3,870 | 300 | 5,432 | 6 | 7 | 156 | 3 | " | 4,241 | 1 | | | Enlarged 1837. |
| | 5,000 | 1,000 | 1,000 | 5,500 | 14 | 10 | 295 | 18 | " | 4,900 | 1 | | Bar, Rod, Hoop, Sheet, Boiler, | " 1845. |
| | 4,500 | 500 | 200 | 4,100 | 10 | 5 | 150 | 24 | " | 3,000 | 1 | | Nails, Spikes. | " 1838. |
| | 5,000 | 100 | | 4,000 | 11 | 5 | 150 | 26 | " | 3,500 | 1 | | | |
| | 2,800 | | | 2,100 | 10 | 5 | 108 | 4 | " | 2,100 | 1 | | | |
| | 2,566 | 60 | | 2,900 | 10 | 6 | 102 | 6 | " | 2,029 | 1 | | | |
| | 4,000 | 500 | 300 | 3,700 | 8 | 4 | 125 | 6 | " | 3,000 | 1 | | | |
| | 3,000 | 50 | 50 | 2,250 | 8 | 5 | 120 | 8 | " | 2,000 | 1 | | | Running half time. |
| 400 | 50 | 50 | 100 | 150 | 2 | 3 | 35 | 4 | " | 150 | | 1 | Rods Shafts, Anchors, Axles. | |
| | 600 | 1,200 | 200 | 1,800 | 2 | 6 | 80 | 3 | " | 1,800 | | | " | |
| | | 1,000 | 1,200 | 1,800 | | 4 | 80 | 4 | " | 1,800 | | | Boiler& Sheet Iron&Sheet Steel, | |
| | | 900 | 450 | 1,200 | | 2 | 50 | 2 | " | 1,200 | | | Bar and Sheet Steel and Iron. | |
| | 9,000 | | | 7,200 | 20 | 4 | 200 | 20 | " | | 1 | | Rails. | Running half time. |
| | 3,300 | | | 2,500 | 8 | 5 | 150 | 5 | " | 2,500 | 1 | 1 | | |
| | 900 | | 40 | 700 | 2 | 3 | 60 | 12 | " | 700 | 1 | 2 | | |
| | 2,000 | 50 | 50 | 1,500 | 4 | 3 | 75 | 10 | " | 600 | 1 | | Bar, Rod, Sheet, Plate, Hoops | Running half time. |
| | 3,000 | | 200 | 2,500 | 8 | 4 | 130 | 200 | " | 1,700 | 2 | | and Nails. | |
| | 3,200 | | 100 | 2,600 | 8 | 4 | 130 | 200 | " | 1,000 | 1 | | | |
| | 1,500 | | 60 | 1,200 | 4 | 3 | 104 | 12 | Water, | 900 | | | | |
| 900 | 73,266 | 10,830 | 5,200 | 72,132 | 180 | 112 | 3,010 | 601 | | 53,620 | 19 | 5 | | |